SOURCEBOOK FOR NATIVE PARTICIPATION IN CANADIAN MINERAL ACTIVITIES

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PREFACE

The CRS technical paper series is designed to present detailed and/or technical information to provide background data for understanding specific aspects of the Canadian mineral industry. This particular study is aimed at a special audience: native people who may wish to become involved in employment or entrepreneurial activities related to the mineral industry. It may also find wider application for other individuals with similar interests and ambitions.

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The views expressed are those of the authors, and do not necessarily represent those of the Centre, its sponsors, or the sponsors of this study.

David L. Anderson
Executive Director
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AUTHORS' FOREWORD

The authors would like to acknowledge the assistance of a very wide range of individuals and organizations who gave generously of their time and knowledge, in both the design and substance of the final report. Sally Hamilton and Al Clark of EMR were active throughout the course of the work. Advice and comments were received from DIAND, particularly from the offices of Indian Minerals (East) and (West). Federal, provincial and territorial geologists and their staff from across Canada provided detailed and careful accounts of material available from their departments, as well as comments on other aspects of the study. Valuable information on the sorts of questions that should not be ignored came from a number of people in the mineral industry, particularly from representatives of the Prospectors and Developers Association and the B.C. and Yukon Chamber of Mines. To these and the many other contributors, we extend our thanks. At the same time, we accept responsibilities for omissions or for errors of fact or interpretation.

We would also like to offer two warnings to readers. First, this sourcebook is by no stretch of the imagination a 'handbook for junior mining'. It is merely a sourcebook, useful in itself, but far from complete in terms of its coverage of the mineral industry and the knowledge needed to be active in exploration or mining. It is an introduction only, but, if properly used, will open up many new areas of knowledge and information to the reader. Second, the information in the sourcebook regarding, for example, names, addresses, phone numbers, government programs, books and journals etc. is constantly changing and may soon be out of date. The book should, however, give some insight into how to track down new and up-to-date information, and how to think about finding one's own sources.

We hope the book will be a useful tool, and that readers will expand upon it and update it to meet their own continuing needs.

Margot J. Wojciechowski
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Centre for Resource Studies
June 1985

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1. INTRODUCTION

BACKGROUND

This sourcebook is the result of comments made at a conference on native participation in mineral development activities, held in March 1984 in Kingston, Ontario. Some native participants at that conference said it was difficult to find information on minerals and mining; others said they had plenty of information but did not know how to use it. The book is designed to direct native people to such information and interpretion, in order to help them get started or move ahead in the minerals business.

For the purpose of this book, mineral activities are considered to include exploration, development, and production of minerals. Oil and gas are excluded, as they require both a more limited regional focus and a different technical orientation.

AUDIENCE

This book is intended for use mainly by Indian bands and their councils, and other native organizations and individuals with an interest in participating in the mineral industry. There are bands, native corporations, groups, and individuals that have considerable knowledge and experience in this business (for example, as prospectors, explorationists, contractors, investors, lenders, entrepreneurs, miners, and other skilled professionals and workers). These people will find much in this book that they already know. We see these groups and individuals more as a resource for the less-experienced than as users of this handbook. A listing of some of the native-owned and/or operated companies is included as appendix II.

OBJECTIVES

1. To provide basic background information on the mineral industry, on the risks and rewards that it offers, and on areas of opportunity for employment or for entrepreneurial activity for native people.

2. To suggest questions that need to be asked by someone starting out in the mineral industry, and identify some of the people and places that can help to provide the answers.

3. To provide names, addresses, phone numbers, etc. for people, publications, and organizations that are useful sources of information about the mineral industry.

2. FORMAT OF THIS SOURCEBOOK

Part I briefly describes who is responsible for mineral regulation in different parts of Canada (jurisdictions), the characteristics of the mineral industry, and the role of negotiation in achieving some of the objectives of native people related to mineral development.

The second section of the book sets out the questions which native people may have about mineral activities, as well as other questions which might not be initially obvious, but which should be asked as well. The book identifies possible sources of assistance in getting the answers to each of these questions. In some cases, government officials may be the best source of help; in others, hiring consultants might be advisable; often, mining companies and academics will provide the information and expertise needed. In each case, basic sources of information and assistance are listed below the questions to be asked. There are, of course, many other sources which have not been included.

Part III gives details on how to contact the suggested sources of information and assistance. Sources are categorized in various ways; for example: directories, legislation, individuals and organizations, and so on. Readers must remember that this material will quickly become out of date, as individuals move to different jobs and government programs and departments are reorganized. However, even where names, addresses, or phone numbers are no longer valid, the information provided will in most cases show the reader how to find the newer information for himself or herself, by using readily available sources such as the Blue pages in the telephone book, or government information services, or personal contacts.

The appendices include additional written sources, a list of government bookstores, and a sample listing of native-owned companies that may be able to provide inspiration, advice, or assistance.

This sourcebook does not give the actual answers to the questions raised. Instead, it points in the direction of sources of information or assistance needed.

The book has been prepared in a looseleaf format to allow it to be updated or modified according to the needs of the reader, with dividers to assist in locating specific information.

3. THE NATURE OF THE MINING INDUSTRY

MINING IN THE CANADIAN ECONOMY

Canada is one of the world's leading mining countries; for years, it has been the world's leading producer of nickel, zinc, and potash, and it is among the top four producers for a host of other commodities including asbestos, uranium, gold, silver, copper and lead.

Throughout Canada's history, mining has been closely tied to national growth and economic development. The search for minerals brought many of the early explorers to Canada, played a major role in opening up new regions, and has underwriten the costs of some of Canada's major transportation links. Early gold rushes brought settlers into remote areas; some mining communities faded away, but others survived and thrived. Iron ore, base metal and uranium developments have been the major cause of northern population growth since World War II, and helped to establish a Canadian foothold in the Arctic. Almost all of the railway lines constructed since the late 1940s were built to service mineral deposits. The St. Lawrence Seaway could not have been justified economically without the promise of iron ore traffic from the Labrador Trough to Ontario and the U.S. Midwest. At the present time coal is the force behind the major transportation and community developments in British Columbia's north east.

Mining activities are scattered all across Canada; every province and territory except Prince Edward Island has active producing mines, although the level of activity and the commodities produced vary from province to province. It is apparent from the map of mining areas (figure 1) that much of the mining activity occurs in regions inhabited by native people. Furthermore, new discoveries have tended to carry operations into more and more remote areas, and can be expected to do so in the future. Consequently, opportunities for native participation will, if correctly pursued, increase as well.

Mineral production makes an important contribution to Canada's economic activity. In 1983, Canada's mineral production (excluding oil and gas), was almost $15 billion. Minerals are particularly important for Canada's balance of trade, since over 75 percent of Canadian production is exported; minerals constitute about 20 percent of all Canadian exports. As a source of employment, the mineral industry provided about 5.5 percent of employment in Canada in 1982. This figure of course rises much higher within regions or communities where mining is the major economic activity. In 1982 the average weekly wage of a worker in the mining industry was $555, slightly less than the rate for the construction industry, at $559, but much higher than the industrial average of $390.

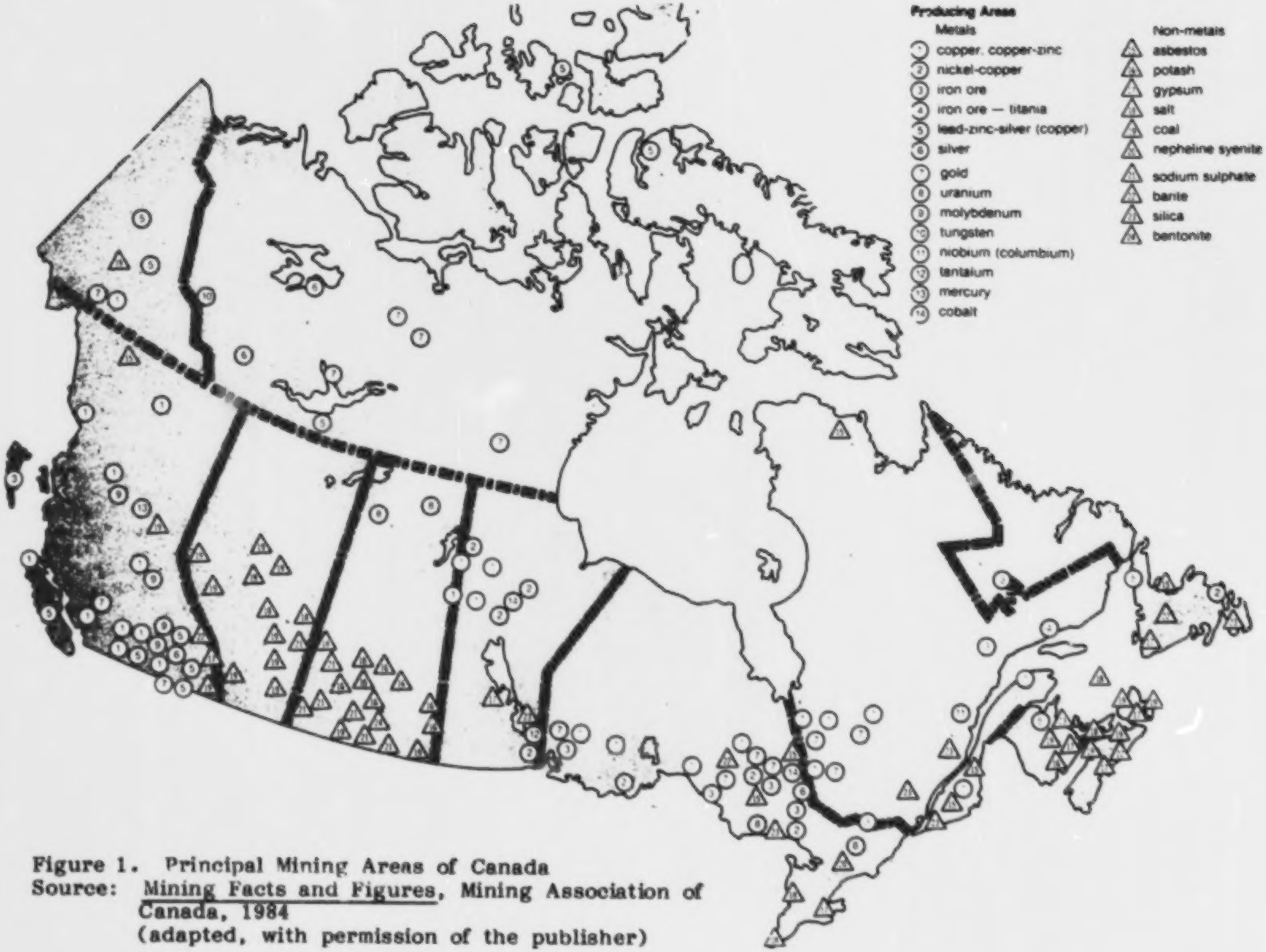
Producing Areas
Metals
copper, copper-zinc
nickel-copper
iron ore
iron ore — titania
lead-zinc-silver (copper)
silver
gold
uranium
molybdenum
tungsten
niobium (columbium)
tantalum
mercury
cobalt
Non-metals
asbestos
potash
gypsum
salt
coal
nepheline syenite
sodium sulphate
barite
silica
bentonite

Figure 1. Principal Mining Areas of Canada
Source: Mining Facts and Figures, Mining Association of Canada, 1984
(adapted, with permission of the publisher)

KINDS OF MINERALS PRODUCED IN CANADA

Minerals can be subdivided into a number of general categories such as metals, down to the individual commodities, such as gold or copper. The following are among the minerals produced in Canada.

1. Metals

1.1 Ferrous metals[a]
- iron ore
- molybdenum
- titanium
- tungsten
- silicon

1.2 Nonferrous metals

1.2.1 Precious metals
- gold
- silver
- platinum group

1.2.2 Base metals
- copper
- lead
- zinc

1.2.3 Other nonferrous metals
- nickel
- uranium
- cadmium
- tin
- cobalt
- rhenium
- arsenic
- rare earths

2. Nonmetallic Minerals

- asbestos
- potash
- sulphur

3. Industrial Minerals

3.1 Construction materials
- gypsum
- cement
- lime
- quarry stone
- sand and gravel (aggregate)

3.2 Other industrial materials
- salt
- sodium sulphate
- talc
- graphite
- mica
- quartz
- barite
- nepheline syenite
- other clay products

4. Fuels

- coal
- uranium (a metal)
- oil and gas (not covered in this book)

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[a] generally associated with steelmaking

Value of Mineral Production

The leading minerals in terms of value of production in Canada are oil and natural gas, which had a value of over $28 billion in 1984. Following these, in terms of value of Canadian production in 1984, were:

	millions of dollars
coal	1,814
iron ore	1,471
zinc	1,438
copper	1,351
gold	1,228
nickel	1,165
uranium	916
potash	759
cement	667
sand and gravel	591
sulphur (elemental)	574
asbestos	412
silver	409
stone	334
salt	214
lead	191
lime	175
clay products	141
other minerals	1,032
Total value of minerals, excluding oil and gas	$14,887

A mineral attracting major attention at present in terms of exploration programs and new mine development is gold. This attention will probably increase in the foreseeable future, as new techniques and equipment for finding gold are developed, and if the price of gold rises, as many observers have suggested it will.

However, gold is not the only mineral worthy of attention by any means. A major factor to be considered by native individuals or groups is the location of deposits or potential deposits that they may wish to investigate or develop. For this reason, less glamourous but nonetheless commercially attractive minerals should also be kept in mind. Prime examples of these are sand and gravel, which rank surprisingly high in the list of value of production. Chances are, sand and gravel can be found on or near most reserves in all parts of Canada. If there is also a nearby market, such as road construction and/or maintenance, such deposits may well be economically attractive.

THE SEQUENTIAL NATURE OF MINERAL ACTIVITIES

Exploration

Finding a mine is a process of studying searching, and selecting. It is conducted in a planned series of steps, beginning with general studies and surveys of broad areas, and narrowing down step-by-step to more specific surveys and detailed testing of smaller and smaller areas. The process, called mineral exploration, is divided into two broad stages, primary and delineation.

Primary Exploration

There are five distinct steps in primary exploration, some or all of which will be found in the exploration programs of major companies. At each step, only the most favourable ground is retained as an object of interest; most of the ground is eventually rejected. When successful, a primary exploration program leads to the discovery of at least one mineral occurrence. The steps are as follows.

i Identification of interests

For example, the part of the world or part of the country or province; or the minerals being looked for, etc. This is a head-office stage of exploration, and largely irrelevant to those native people who are interested only in mineral activities in their own areas. It is, however, an essential and crucial part of the primary exploration process.

Identification is made largely on the basis of studies of maps and reports and accumulated knowledge. This selection depends on a number of technical, economic, and political factors, including:

- the political rules, regulations, taxation, etc.;
- company capabilities, expertise, etc.;
- the known geological characteristics of the area;
- geological concepts regarding the occurrence of mineral deposits;
- prices and markets for minerals;
- availability of infrastructure, such as transportation, power, townsites, etc.

ii Area selection

Within the large regions identified in stage i, an area of concentration will be selected. For example, it might be the Hemlo area in Ontario, or the Chibougamau area in Québec. Again, this is largely a head-office desk job. The selection is narrowed on the basis of economic, technical, political, and other factors.

iii Reconnaissance

At this stage the exploration activities leave the head or regional office and move out into the field. Reconnaissance most often involves airborne surveys which identify favourable indications (called 'anomalies') for ground follow-up study. Other methods used include traditional prospecting. Prospectors can operate either as independents in areas of their own choosing, or within a company program.

iv Follow-up ground exploration

The most favourable areas identified by reconnaissance methods will be examined first, in the ground follow-up step. The ground of interest is usually reserved for exploration at this point by the process of staking of mineral claims. Ground follow-up generally involves linecutting (laying out a grid of reference points), geological mapping, detailed geophysical and geochemical surveys, and trenching. If successful, it leads either to the identification of a mineral occurrence (through trenching) or to the identification of promising locations for the next step, which is exploratory drilling.

v Exploratory drilling

If successful, exploratory drilling leads to the discovery of mineral occurrences, which, if sufficiently encouraging, will be followed by the secondary, or delineation, stage of exploration.

Delineation

The major activity of the secondary exploration or delineation stage is extensive diamond drilling, generally done from the surface, at the site of a mineral occurrence. In difficult cases it may also be necessary to sink a shaft and drill from underground locations. The purpose of this stage is the provision of information on the size, grade, and other physical characteristics of a mineral deposit. If successful, the delineation program yields a possible economic discovery; that is, a deposit that may be sufficiently rich and large to justify development.

Feasibility Study

The next stage is a feasibility study, or economic evaluation of the viability of the deposit as a producing mine, which determines whether or not a discovery is in fact worth the cost of development; that is, if it is an economic mineral deposit. The study must take into account geological information, engineering information, market and other economic factors, and government policies. If the study indicates that the deposit will provide an adequate financial return, and funds can be raised, mine development will proceed.

Mine Development

The development stage involves planning and constructing the mine and associated buildings and facilities. Tasks include:

- engineering and designing the mine;
- planning the rate of production;
- purchasing supplies and equipment;
- preparing the underground shaft, tunnels and working areas, for underground mines;
- removing the overburden or surface waste for an open pit mine;
- construction of the surface facilities, for example the headframe, storage areas, mill, offices, maintenance shops, and sometimes accommodation in remote regions;
- construction of any necessary infrastructure and services such as roads, airstrips, docks, water treatment facilities, etc.

The construction phase of mine development is the most visible activity in the process of finding and operating a mine, and offers the most opportunities for employment. If a new mine is developed as soon as a deposit has been found to be economic, it generally takes about 5 years to put into full production.

Mineral Production

Mineral production includes both mining and mineral processing. Mining may involve further stripping of overburden and waste for open pits, the development of ore reserves to prolong the life of the mine, drilling, blasting, moving of ore to the processing facilities, filling of mined-out areas, and other technical and support services.

Processing activities will vary, according to the ore produced and the end-product metal sought. For base metals, for example, such as copper, lead, and zinc, and for tin, the processing stage usually involves crushing to smaller sizes, grinding to a fine powder, flotation (in which the powdered ore separates in liquid, the metal concentrate rises to the top, and the waste, or tailings, sinks to the bottom), drying, tailings disposal, and storing or loading of concentrates for shipping. Other processing methods include leaching (used for example for uranium), cyanidation (a common method of recovering gold from ore), and roasting, which removes sulphur and arsenic from ore.

ECONOMIC CONSTRAINTS IN MINING - COSTS AND RISKS

Exploration Costs and Risks

The exploration phase of mineral activities is a long-term hunting expedition. The purpose of the sequential nature of the activities and the systematic discarding of all but the most favourable areas at each step is to minimize costs by minimizing risk and the chances of failure. However, although the risks decrease at each stage, the sources of risk are many and the overall level of risk of failure to recover costs remains high in the mineral industry.

Even following the sequences of the formal exploration program described above, the process is very expensive. It has been estimated that the average cost of finding and delineating an economic deposit is between $20 million and $40 million. Expenditure of this amount, however, does not guarantee success. On the other hand, many small exploration companies have been successful with much smaller exploration budgets. For example, re-exploration of mineral occurrences which have been rejected by others can be done at a much more modest cost, and has often led to success.

In mineral exploration, the chief risk is geological: i.e. the difficulty of finding economic mineral deposits. Mineral occurrences are few and far between, and very few of those that are found turn out to be good development prospects. Studies of base metal exploration in Canada suggest that only about 1 mineral occurrence in 50 will turn out to be an economic mineral deposit; in other words, the probability of success, given the discovery of a mineral occurrence, is about 2 percent.

The chances of success for an exploration organization can be improved by spending larger amounts of money, but the expenditures required to make success likely are very large. What does this mean in terms of the level of expenditure needed to ensure discovery of an economic mineral deposit? As table 1 shows, even expenditures of $50 million on an exploration program cannot guarantee success, although the chances are fairly good.

Table 1

EXPLORATION EXPENDITURES AND CHANCES OF SUCCESS: CANADIAN AVERAGES

Annual Budget	Planning Period	Total Expenditures	Chances of Success
$ 1 million	5 years	$ 5 million	20%
$ 2 million	5 years	$10 million	36%
$ 4 million	5 years	$20 million	60%
$10 million	5 years	$50 million	89%

Development and Production Costs: The Economics of the Development Decision

The decision to go ahead with development of a mineral deposit is based on a broad range of economic factors. Basically, management must decide if the required investment of capital is justified; that is, if there will be sufficient cash flow, once all anticipated costs have been met, to yield an acceptable return for the investors.

In very simple terms, the cash flow estimation and economic evaluation of the deposit are made as follows.

i The in-ground or gross in-situ value is calculated by multiplying the geological reserve tonnage by the geological grades, and multiplying again by metal prices. Since prices for metals vary widely and change rapidly, a range of possible prices should be used, and management must decide which estimate it feels most comfortable with.

ii The revenue at the minesite is determined by subtracting from the expected gross revenue certain on-site losses and off-site costs that will be incurred in the process of producing and delivering the saleable product:

- mining losses: for example, some of the contained metal will be left behind in the mine, in pillars or walls;
- milling losses: a copper-zinc ore may contain 2 percent copper and 5 percent zinc. This may be upgraded through processing to a concentrate containing 25 percent copper and 55 percent zinc, but as much as 10 percent of the original copper and 20 percent of the zinc may be lost in the tailings;
- the cost of transportation of the concentrate to the smelter, (which may be just down the road, across the country, or across the ocean) must be deducted, as well as the cost of smelting and refining. This is because the price estimates used in step one are, of necessity, prices for refined metal, while the metal being produced and sold from the mine is only in concentrate form.

iii The net revenue, or before-tax profit at the minesite can then be estimated by subtracting the costs of production from the expected revenues. These include the preproduction capital cost, as well as the production costs such as wages, materials, energy, etc.

iv Subtraction of all estimated taxes* from the estimated net revenues over the lifetime of the mine produces the after-tax cash flow. This figure can then be used to assess the economic viability of the project, i.e. to decide whether or not the project will yield enough revenues over its lifetime to pay all costs and taxes and still provide an acceptable return to the original investors. If the estimated return is not adequate, the project will not be developed, but rather abandoned, or else held in hopes of changes that will improve the economics.

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* Taxes will be minimal in the case of band-owned corporations operating on reserve.

In view of all the losses and costs involved in converting a mineral deposit into metal for sale, looking at mines in terms of the gross in-situ value can be very misleading. A multi-million dollar deposit in the ground may make a good profit for its finders and developers, or it may be worthless. The real economic value depends on the whole range of factors described above, including ore grade and quality, competence or strength of the ore and host rock, distance to markets, prices for the mineral products, and the cost of capital including the interest rate on borrowed money. In other words, the value of minerals in the ground is not necessarily, and, in fact, rarely is transformed into, money in the bank.

Table 2 shows how these costs and revenues may vary between different kinds of mineral deposits. The deposits shown are hypothetical or imaginary examples, since no two deposits, even of the same commodity, are exactly alike.

Table 2

RATE OF RETURN CALCULATIONS FOR THREE HYPOTHETICAL MINES[1]
(millions of dollars)

	Zinc Deposit	Copper Deposit	Gold Deposit
Gross in-situ value	500	500	500
Less: Mining and milling losses Smelting and refining charges Product transportation costs	339	238	131
Revenue at the minesite	161	262	369
Less: Capital expenditures and operating costs	186	167	159
Before-tax cash flow	-25	95	210
Less: Taxation payments	1	55	123
After-tax cash flow	-26	40	87
Net present value at 8 percent, start of development	-33	10	38
Rate of return (percent)	-8	13	25

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1. For the assumptions and methods used to derive the figures in this table, see the original source, B.W. Mackenzie, Economic Mineral Exploration Targets, Working Paper No. 28, (Kingston: Centre for Resource Studies, 1984).

The net present value is the total profit (or loss) expected to be realized over the lifetime of the mine, calculated in terms of the value of the investor at the beginning of the development (by discounting the value of the expected future earnings). The 8 percent mentioned is assumed to be the cost of capital; that is, the cost of borrowing money to develop the mine.

The rate of return is the percentage which the original investors hope to earn on their investment, just as interest is earned by putting money in a bank account. In view of the effort and risks involved in mining, it is generally agreed that this rate should be significantly higher than safer and easier alternative investments, such as banks deposits or long-term bonds.

It is clear from the table that, if these examples represented real deposits awaiting development decisions, the gold mine would go ahead and the zinc mine would not. The copper deposit is marginal, or just on the line between attractive and unattractive, and would require further study, particularly of the risks involved. This is in spite of the fact that all start out as $500-million deposits.

Risk in the Mining Stage

The economics of decisions to go ahead with exploration programs or mine development are complicated by a great variety of risks, which introduce uncertainties and make it difficult to make accurate estimates. Calculations about the value of an apparently economic mineral deposit can be turned upside down overnight by many kinds of changes.

The greatest uncertainty arises from price risk. Metal prices are very unstable, and we have recently observed that prolonged low prices for metals have led to closures of a great many Canadian mines. Increased competition from other countries can have the same effect, leaving Canadian producers unable to sell their concentrates or metals, and therefore without revenues. Low prices have effectively turned valuable ore into waste rock, and formerly profitable companies are in some cases struggling to survive.

Unexpected cost increases are another risk faced in the production phase. These may be imposed from abroad, as were the oil price increases of the 1970s, or domestically, for example through environmental or health and safety regulations.

Changes in taxation and royalty structures and rates, particularly changes introduced during the life of a mine and not anticipated in the feasibility studies, are another risk faced by mining companies.

Geological risk is a factor in mine operation as well, since the total extent and quality of the reserves and quality of the surrounding rock is generally unknown at the beginning of the mining phase.

Any or all of the above risk factors, and others not mentioned here, can move a company from a position of profit to one of loss, resulting eventually in cutbacks, shutdowns, permanent closures, and, in extreme cases, bankruptcy.

Even at the best of times, mining companies on average do not make substantial profits. It has been calculated that the average return on funds invested in mining in Canada over the period 1960 to 1976, which were relatively good years for mining, was about the same as the return on long-term bonds. However the variations in profit levels, both up and down, (in other words, the risks) were much greater. In other words, mining investments have not been receiving the higher returns that conventional economics contends should go to higher risk projects.

This raises the question: why do people invest in mining at all, if they can make profits more safely and more comfortably by buying government bonds? The answer lies in the wide range of rates of return: very high for a few companies, or for a few years; very low for others; the rest somewhere between. Everyone hopes to have the rare combination of skill and luck that marks the few big winners.

AREAS OF OPPORTUNITY FOR NATIVE PARTICIPATION

Preliminary Considerations

The areas of opportunity for native participation are limited by a number of factors. One is the fact that the mining industry goes through periods of hard times, when the number of employment opportunities are reduced, and so is the ability of companies to fund special employment and training programs. Another is the high levels of capital required for those who wish to become involved in mineral exploration or development as independent entrepreneurs.

Anyone considering involvement should carefully evaluate the following factors.

i The risk involved

Employment: risk is lowest in such activities as employment in an operating mine. The major risk here is loss of employment in case of cutbacks or closures. Employment in exploration is riskier, in the sense that exploration is by its very nature seasonal and temporary.

Entrepreneurial Activities: in entrepreneurial (i.e. self-employment or other independent) activities, prospecting risks the least, in the sense that the major investment is the individual's own time. The possible rewards are much higher, but the chances of reward are very small. In activities where capital is invested, the risks increase in the sense that there is more to be lost in case of business failure. Service industries present the usual risks of small businesses, while mineral development activities are more risky because they involve large expenditures and geological and metal market uncertainties.

ii The level of skills required

A number of opportunities for on-the-job training of unskilled employees exist in both exploration and mining activities. However, for longer-term and better-paid employment, skills (e.g. in handling equipment, and in managing finances and people) and trade or professional qualifications will help.

iii The amount of capital required

For entrepreneurial activities, basic prospecting is the least costly. Service contracts such as trucking, catering, outfitting etc. have higher capital requirements, while formal exploration and mineral development activities have capital requirements in the millions of dollars.

iv Other factors

Other factors for consideration include the career goals of the individual, the level of responsibility sought, the working conditions, whether permanent or temporary activities are preferred, the mobility of the individual, (i.e. willing and able to move to different region?), etc.

Employment - With Exploration Companies

Note: this sourcebook is not designed to assist native groups planning to set up a major formal exploration program. Such activities require a high level of expertise in geology and management, as well as very large amounts of high-risk funding. Native groups seriously considering such activities should include or hire professional staff, and seek the advice of additional professionals and companies in the same business.

The principal opportunities in exploration lie in employment and in contracts within the programs of existing exploration companies. A number of the tasks involved in the follow-up ground exploration stage of exploration programs can be carried out by individuals with a minimum of on-the-job training and experience. These include:

1. linecutting (clearing bush on a predetermined grid pattern to permit systematic study of an area);
2. trenching (clearing of overburden to expose the bedrock);
3. staking of claims;
4. geochemical sampling (collection and labelling of samples);
5. prospecting (collecting interesting rock samples, and noting the exact location of the source);
6. geophysical equipment operator or assistant.

The first two tasks would likely be done on salary; the latter four could be performed on a piece-work basis or on salary.

Contracts for native organizations are also possible in exploration programs. These might include contracts for linecutting and trenching activities, and for staking claims. The contractor would provide the workforce and agree to complete the task according to company specifications. Trucking and catering services to exploration camps are also a good possibility. There are already several native-run companies (see appendix II) engaged in providing geophysical services on contract to exploration firms. This sort of service requires a high level of expertise and a significant amount of capital for equipment.

Employment - With Mining Companies

Many operations in the northern territories and in northern Saskatchewan offer fly-in programs with special rotation schedules that permit northern residents to continue to live in their own communities and spend considerable time with their families between work periods. Special training programs may also be provided. However, in most mining operations, native and nonnative workers are given the same work schedules, living arrangements, and training.

The range of employment opportunities at producing mines is fairly wide. Most of the jobs require specific training, either in a formal program such as apprenticeship, or on the job. Virtually all require some high school education, and many require grade 12 or equivalent.

The following lists of job classifications for various actual mining projects provide an indication of the type and range of mining jobs which may be available.

Nanisivik Mines Ltd.

This is an underground lead/zinc mine on Baffin Island in the Northwest Territories, with a work force of about 200. The list is taken from records of northern employees during 1981, and is not a complete listing of all job classifications at the mine.

- mechanic
- carpenter
- camp attendant
- heavy equipment operator
- electrician apprentice
- technical assistant
- heavy duty mechanic apprentice
- mine service crew
- mill operator
- labourer
- welder apprentice
- millwright apprentice
- kitchen attendant
- blaster helper
- crusher helper
- clerk
- equipment operator
- storeman
- surface crew
- mine crew

Detour Lake Gold Mine

This is an open-pit gold mine in northern Ontario.

Of 18 native people employed in late 1984, only 3 had previous experience in mining. Most therefore began in the labourer classification, with the posssibility of advancing as they gain experience. The major classifications of interest are as follows:

Maintenance Department:
- labourer - trades helper
- labourer - serviceman - trademan I, and heavy duty mechanic
- apprentice
- heavy duty mechanic - licensed trade
- gas mechanic - licensed trade

Mine or Open Pit Department
- labourer - ore truck trainee or operator (50 tons)
- labourer - blaster trainee
- labourer - driller trainee
- plus about 10 other types of heavy equipment for further training and qualification.

Mill Department
- labourer - operator helpers - training for mill operator

Support Services
- camp administration (e.g. clerks, secretaries, bookkeepers etc.)
- warehousing
- transportation
- catering (cooks, dishwaters etc.)
- accommodation services (e.g. housekeeping, laundry, janitorial etc.)

Cluff Amok Mining Limited

This is an open pit and underground uranium mine in northern Saskatchewan. Positions held by northerners at Cluff Lake in 1983 included the following.

Supervisory: (1st and 2nd level)
- services general foreman
- services foreman
- personnel assistant
- warehouse foreman
- warehouse shift boss

Technical:
- clerk/computer operators
- laboratory technician
- radiation sampler
- environmental sampler
- laboratory sampler

Trades, tradehelpers and operators:
- stock person (warehouse)
- mill operator
- mine operator (heavy equipment operators)
- dry attendant (janitorial and cleaning)
- mechanical tradeshelpers
- journeyman plumber
- journeyman welder
- apprentices
  - heavy duty mechanic
  - industrial
  - electrical
  - welder
  - plumber/pipefitter

All positions listed under trades, tradeshelper and operators are under an in-house training and progression system. Journeyman trades are the responsibility of the provincial government's apprenticeship branch.

The Independent Entrepreneur - Prospecting

Prospecting for minerals has traditionally involved individuals or parties of two or more, travelling in remote areas of interest, and carrying a minimum of equipment. The level of training and experience varies widely: some prospectors are weekend amateurs and some are geologists; some are beginners, and some have had long years of training and experience in the bush.

In spite of the growing cost and technical complexity of mineral exploration programs, there is still a place in the mineral industry for this traditional method of exploration, although the regions and situations where prospecting can be done effectively are somewhat limited. Since prospectors look for favourable indications of mineralization, they can look only in areas where there is little or no overburden, and the bedrock may be exposed. Areas close to existing major deposits or known finds are likely to be explored or held by large companies, leaving little opportunity for the independent prospector. There are still many areas of interest to prospectors, however, as evidenced by their rapidly growing numbers, especially in regions with gold potential all across Canada. For example, tie-on properties beside claims with good showings are of interest, as are claims that have been abandoned after preliminary examination.

Many native people are well situated to become prospectors, by virtue of their location in favourable areas and their familiarity with the bush. The relatively simple training required to get started is easy to obtain, and the work can be pursued intensively or can be fitted in, often seasonally, with other activities such as hunting or trapping. The best way to obtain training is probably to work for a few seasons with an experienced prospector.

The Independent Entrepreneur - Service and Supply Contracts

Native entrepreneurs and organizations already provide a broad range of contract services to mining operations, and the opportunities for expansion of such activities are extremely varied. Among the services for which mining companies may be willing to contract are the following:

- claims staking;
- linecutting;
- trenching;
- geophysical operations;
- transportation - of people, materials, supplies, concentrate, etc.; by truck, boat, barge, air etc.;
- hiring of employees;
- catering;
- grounds and building maintenance;
- construction;
- road building and maintenance;
- provision of lumber;
- equipment rentals;
- manufacturing of special clothing or equipment;
- security.

4. JURISDICTIONS AND RESPONSIBILITIES

WARNING

This section is somewhat long and complicated, but it looks at a very important topic. Only by knowing which level of government is responsible for which regions, regulations, services, etc. will it be possible to find all the necessary information to proceed with mineral activities, particularly for the independent entrepreneur. Unfortunately, some of the aspects of responsibility for mineral-related activities are unclear, under negotiation between governments, or actually in dispute at present. Complications and uncertainties are especially confusing regarding reserve lands.

The information that follows is the authors' best attempt to describe the various jurisdictions and responsibilities in general terms. The situation may change at any time, and other observers may have different interpretations or views of the present situation. When doubts or confusing circumstances arise, always seek further advice from provincial and DIAND regional offices.

OFF RESERVE MINERAL ACTIVITIES

Under the Canadian constitution, the provinces have been given ownership and control of the mineral resources on most of the land within their boundaries. This means that provincial governments establish the mining laws and control the rules for mineral exploration, for acquiring mineral claims and leases, and for access to minerals lands. In the Northwest Territories and Yukon, the federal government asserts its ownership of all minerals and regulates mining activities.

In addition to mining laws, many different kinds of laws and regulations, such as those dealing with employment standards and safety, educational qualifications, and environmental protection, apply to mining activities. In the provinces, these laws and regulations tend to come from the provincial governments, while in the territories there is a mixture of federal and territorial legislation. Throughout Canada, federal legislation in the same fields may exist as well, adding to the complexity (e.g. Clean Air Act, Canada Labour Code).

A general rule of thumb for enquiring about legislation, regulations, and useful government programs concerning such things as mineral rights, mining activities, environment protection, employment practices, training, and so on is to start with the government of the province, or with DIAND in the territories. Provincial and territorial governments should, in addition, be able to suggest federal legislation, regulations, and programs in these areas that might also be important.

ON RESERVE

The situation becomes much more complicated when one considers mining activities on Indian reserves, where there are two important jurisdictional issues to consider:

- the relationship between federal and provincial government responsibilities for mining activities on reserve;
- the concept of 'surrender' of mineral rights on reserve lands by a band, to permit on-reserve mineral activities.

Federal and Provincial Government Responsibilities for Mineral Activities on Indian Reserves

Mineral rights in Canada generally belong to the Crown (which can in turn mean either the provincial or the federal government). What that means in practice for the ownership and control over mineral rights on reserve can vary enormously, according to a wide range of factors, including:

- the year the province entered confederation;
- the year the reserve was established and the practices concerning mineral rights at that time;
- individual arrangements between the provinces and the federal government concerning ownership and regulation of mineral rights.

The British North American Act (BNA Act) of 1867 gave the federal government legislative jurisdiction over Indian lands. However, in 1888 the Privy Council ruled that this did not include ownership of the lands. As a consequence, surrender of land or mineral rights by a band resulted in provincial rather than federal ownership. Subsequently, federal/provincial agreements have been negotiated with most of the provinces, in order to permit the federal government (DIAND) to administer surrendered lands and mineral rights.

Variations in (and in the case of Québec, the absence of) such agreements have led to variations in DIAND's ability to negotiate employment or revenue opportunities for bands when developers wish to exploit on-reserve minerals. For example, under the terms of the agreements in Nova Scotia and New Brunswick, the provincial governments own the mineral resources of Indian reserves. Therefore, it is theoretically impossible for the band to surrender its interest in the minerals as required by the regulations, and administratively impossible for DIAND to grant permits and leases. However, these provinces concede that the regulations under the Indian Act are applicable, and that the Indian bands are to receive all benefits from mineral resource development as long as the band does not surrender all its rights and interests in the reserve and as long as the band exists. Clarification of the confusing interpretation of these agreements is part of the department's goal for the 1984-85 fiscal year.

There is no agreement with the Province of Québec, which claims complete jurisdiction over mineral development once a band surrenders its interest in on-reserve minerals. DIAND is presently establishing a departmental position so that an agreement can be reached with this province, providing for benefits to the native people for on-reserve mineral activities.

In Ontario the terms of the 1924 Ontario Land Agreement provide that the province receives 50 percent of the benefits resulting from mineral activity on Indian reserves, with the exception of some reserves for which the province's share has been waived entirely. This agreement is being renegotiated with the aim being that the Indian people obtain all benefits from mineral exploration and exploitation.

In the provinces of Manitoba, Alberta and Saskatchewan, the Indian people receive 100 percent of the benefits of mineral activities on Indian reserves, under the provisions of the 1930 Natural Resources Transfer Act.

In British Columbia, mineral development on Indian reserves falls under provincial jurisdiction, in accordance with the 1943 British Columbia Indian Reserve Mineral Resources Act and Agreement. This agreement provides for a 50-50 split of the revenues from mineral development between the province and the federal Crown, the latter's share being for the use and benefit of the Indian bands concerned. Although the B.C. Mining Regulations rather than the Indian Mining Regulations are applicable on-reserve, a 'mineral surrender' is still necessary before on-reserve development, to ensure that it is in accordance with the bands' wishes. As the benefits to the Indians under the 1943 agreement have been inconsequential to the present time, DIAND has been in the process of renegotiation of the agreement to secure improved benefits for the Indian people.

Because of the variations of ownership and control features, and continuing negotiations and disagreements on the current situation (e.g. the federal and B.C. governments disagree on who owns the coal on reserve lands), the best procedure to follow is enquire at both the nearest DIAND or Indian Minerals office and at the provincial mining department about the situation in specific areas.

In general, the federal government's Indian Mining Regulations apply to mineral activities on reserves. Provincial mining regulations also apply on reserve, when anyone but the band itself is carrying out mining activities, provided the provincial laws do not conflict with the Indian Act or the Indian Mining Regulations. In case of conflict, the federal laws take precedence.

Mineral Surrenders

In most provinces, no matter which level of government owns on-reserve minerals, the minerals are held by the Crown in trust for the band. In order for any mineral exploration, development, or production to take place on reserve, the band must surrender its rights to the proposed development (except in the case of sand and gravel, which does not require surrender). Once a band has surrendered its mineral interests, the mineral rights are administered by DIAND under the provisions of the Indian Mining Regulations (or the Indian Oil and Gas Act and Regulation). The exception to this is in Québec, which claims complete jurisdiction over mineral development following mineral surrender.

Following mineral surrender, and with the band's permission, DIAND may be able to negotiate terms for permits or leases which include economic compensation, special revenues, equity, or opportunities for employment or contracts, for the band.

Sharing of revenues from standard licence and permit fees, royalties and so on varies from province to province.

SUMMARY

In summary, jurisdiction over minerals off reserve rests with the provincial department responsible for mining, or with DIAND's Northern Affairs offices in the territories. On reserve, the first authority is the Indian Minerals Directorate.

5. THE ROLE OF NEGOTIATION

INTRODUCTION

Negotiation is the process of consultation between two or more individuals or groups carried out to reach an agreement or compromise. It is important to consider negotiation related to mining activities for two reasons. First, native people may, by force of circumstances, become involved in negotiations with companies which want to carry out mining activities on or near traditional lands. Second, both required and voluntary negotiations can play a role in enhancing the opportunities for native people who want to get involved in mining activities through, for example, joint ventures, contracts, or employment.

Sometimes, in the past, Indian bands and other native organizations have negotiated agreements with companies or with governments in order to protect the interests of native people as mineral exploration or the development of a mine proceeds. Native peoples' interests have been defined to include protection of the environment, the provision of employment by companies, company support for native business people, and many other things. Experience has shown that native people have had mixed success in having their interests heard and in achieving their demands or wishes.

DIFFERENT APPROACHES TO NEGOTIATION

There are differences in the approach taken by the various provincial and federal regimes in Canada, and even within jurisdictions, with changing governments or economic circumstances. Various mining companies also have different policies toward the achievement of social and economic benefits for native people. Consequently, native people must plan any intended negotiations very carefully.

Voluntary Negotiation

One sort of approach might be necessary in a province or territory where the government relies on voluntary steps by companies to achieve social and economic benefits for native people. In this case, it may be most effective for native people to approach the company taking the lead role in the mining exploration program or development directly, to set out their aspirations for participation and their point of view about appropriate steps to minimize environmental and social damage which native people may anticipate. For example, Dome Mines and the Nishnawbe-Aski nation carried out some direct discussions of this nature associated with the development of the Detour Lake mine. One outcome of these discussions was company financial assistance for the Nishnawbe-Aski to establish an economic coordination office to further economic development in areas relative to their peoples' interests.

Required Negotiation

In other jurisdictions, governments require companies to have benefit programs, and monitor the achievement of those programs. This is the case in the Northwest Territories, where both the federal and territorial governments require companies to submit socio-economic action plans outlining northern benefits before development begins, and to offer employment and other economic benefits to northerners. Community consultation is also part of the approval process for exploration permits in this jurisdiction. Another example is Saskatchewan, where surface lease agreements have required such things as specific quotas for northern employment, preferential treatment of northern contractors, training programs for northerners etc. (More recently, the requirements have been less specific, taking the form of targets rather than quotas.)

In situations where such requirements are imposed by governments, there may be more emphasis on negotiating with governments, although direct relations with companies are still very important in order to inform companies about native culture, and about native aspirations and concerns about exploration and development. Such direct dealing will make it more likely that the specific plans formulated by companies for native participation in mining activities are realistic and useful. As a bonus, companies may become more enthusiastic about native participation, to the point where they do more than is required by government regulation to ensure native involvement, and continue their efforts after government stops having formal requirements in this area. This seems to be the case in northern Saskatchewan, where a number of communities continue to supply labour and goods and services to the Cluff Lake mine, long after formal provincial government requirements for Amok/Cluff Lake Mining to encourage such participation have been withdrawn.

Differences in Relative Size of Native Population

Native people may also use different approaches to negotiation where they constitute the majority of the population and where they are a minority.

To use a non-mining example, the Cree and Inuit of northern Québec formed the majority of the local population in the area to be affected by the James Bay Hydro-electric Development. Initially, when attempts to persuade the Quebec government to halt the development proved fruitless, they were in a good position to begin legal proceedings to make their point of view heard. Ultimately, they did receive some land and cash compensation and a new governmental regime for the area.

The Inuit of the community of Baker Lake in the Northwest Territories, also the majority of the population in their area, thought it necessary to have some input into decisions about the use of traditional lands during a period of very active uranium exploration in the area. It is interesting to note that the resulting much-publicized court case did not really resolve the issues raised by the people of Baker Lake. However, it did serve to raise the issues in a public forum and, perhaps as a result of the greater understanding of local Inuit interests which emerged, the climate of cooperation between native people and companies in Baker Lake area is much improved.

In the Hemlo area of northern Ontario, on the other hand, Indian bands living in the area of mining activity are a minority in the local population, and may find that they have a less-exclusive claim to use of the area where development is occurring. In addition, they are in competition with local nonnative residents for jobs and business opportunities associated with the gold mining developments. Accordingly, they may find it necessary to develop a fairly comprehensive case to make directly to companies active in the area, if they are to encourage their involvement. This would seem to require a precise statement of native aspirations and abilities.

MAKING THE MOST OF NEGOTIATIONS

Regardless of the precise situation, negotiating skills are very important. One of the most important is the ability to assess the strengths and weaknesses of native peoples' position, in order to identify the best approach for achievement of the greatest possible social and economic benefits from a particular development without damaging its economic viability.

Use of the courts has been one approach to achieving native objectives. However, the costs of this approach, in terms of both legal fees and future company relations, should be weighed very carefully. Perhaps the best starting point is to approach companies directly, to gain some understanding of their willingness to encourage native involvement in mining activities, and to give them an opportunity to find out about local native peoples' aspirations and abilities related to mineral exploration and development as early as possible.

Awareness of the need for and skills involved in negotiations and compromise is important in other ways as well, for native people who want to get involved in mining activities. For example, negotiations of a strictly commercial nature with suppliers, banks, governments and existing mining companies or syndicates may be necessary at different times. In other words, negotiation can be both a means for native bands or groups to ensure harmonious and beneficial relationships with companies operating on or near traditional native lands, and a necessary tool for the conduct of business by native enterpreneurs.

Part II Asking the Right Questions in the Right Places

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1. INTRODUCTION

This section asks questions that will or should be asked by native people who are beginning to look at mining industry activities as a source of employment, business activity, contracts, etc. Neither the lists of questions raised nor the information sources suggested are by any means complete or exhaustive. They will, however, serve to start the reader out, to inspire new questions, and to lead to additional information sources.

No attempt is made to answer the questions, which are deceptively simple in the asking but very complicated and detailed in the answers that will result. Instead, the reader is referred to specific sources of advice and assistance, ranging from free government services through to employing consultants to provide the needed information or guidance.

In some cases, the question raised is an end in itself. In other words, the question raises matters that might not otherwise have occurred to individuals just entering into mining activities, (for example, about taxes, or about union activities). Such matters can be both expanded upon and answered by the sources indicated.

2. BASIC INFORMATION ON MINERAL POTENTIAL AND MINERAL ACTIVITIES - PAST AND PRESENT

There are distinct differences in the answers to many of the questions below, on and off reserve. However, since there is no reason to assume that native people will wish to limit their activities to reserves, both kinds of information sources are identified.

1. *If there are no mineral activities in my area, how do I find out if there is any point in considering any kind of mineral industry participation; i.e., is there any mineral potential in my area?*

   a) On Reserve

   Enquire at the offices of Indian Minerals (East) for reserves in Manitoba and east of Manitoba; Indian Minerals (West) for reserves in Saskatchewan and to the west and in the territories (addresses are given on page 94).

   Information on the mineral potential and known occurrences on reserves is not made available to the National Mineral Inventory. It is made accessible only at the discretion of the Indian Minerals Directorate and with the permission of the band.

   b) Off Reserve

   National Mineral Inventory (page 64); Geological Survey of Canada (pages 64-65); Energy, Mines and Resources Canada, Mineral Supply Branch (page 96), provincial mines departments in the provinces (pages 99-102); DIAND regional offices in the territories (pages 95-96). Addresses for all these offices are found on the pages listed.

2. *How do I find out who is or has been exploring for minerals in an area? Where and when was the exploration done?*

   a) On Reserve

   Band office, Indian Minerals (East) or (West) (page 94)

   b) Off Reserve

   District mining recorders' offices (pages 103-106), provincial mines departments (pages 99-102).

3. *How do I find out whether or not claims have been staked and the current status of the claims?*

   a) On Reserve

   Indian Minerals offices.

   b) Off Reserve

District mining recorders' offices (pages 103-106); provincial mines departments (pages 99-102); DIAND regional offices in the territories (pages 95-96).

4. *How do I find out whether or not there have been applications for permits and leases?*

a) On Reserve

Indian Minerals offices.

b) Off Reserve

District mining recorders' offices (pages 103-106); provincial mines departments (pages 99-102); DIAND regional offices in the territories (pages 95-96).

5. *How do I find out whether or not any drilling work was done? Can I get the results? e.g. drill core in storage? How can I interpret these results? Who can help me?*

a) On Reserve

Indian Minerals offices

b) Off Reserve

District mining recorders' offices (pages 103-106), resident geologists (pages 99-102), drill core libraries in most provinces and territories (pages 99-102). Generally, drill cores from previous exploration programs are available only after a claim has lapsed.

6. *How do I find out how much has been invested in the area? How recently? Has there been any speculative activity?*

Names of companies are available from mining recorders' offices (pages 103-106), along with some details of expenditures. Company activities are reported in company annual reports, in the Northern Miner (page 73), and in the Canadian Mines Handbook. Some aggregated financial information is available from mining offices. The Canadian Mining Journal (page 73) publishes an annual summary of major project expenditures. Indian Minerals (East) and (West) (page 94) will have information as well.

7. *Where can I find out about the future plans of those already active in the area?*

Companies active in the area may be listed in the local telephone book Yellow Pages under Mining or Exploration. See company annual reports, company spokesmen, the Northern Miner (page 73). (For financial and other reasons, advance information about company plans may be confidential). Some information is available through provincial mines departments (pages 99-102). Large-scale or controversial projects may have public hearings and impact studies. Indian Minerals (page 94) can also advise.

8. *Who can help me understand the information that is available about mineral potential and activities?*

Indian Minerals staff (page 94), Geological Survey of Canada staff (pages 64-65), provincial resident geologists (pages 99-102), possibly company exploration staff (page 107) or university geologists (pages 113-117), or, for a fee, consultants (pages 118-119). This is a very controversial area: ten people may give eleven differing opinions, due to the uncertainties, both geological and market, that are involved in evaluating mineral potential.

3. JOB SKILLS, TAXES, TREATY ENTITLEMENTS, UNIONS

Many of the information sources listed in section III will be of use in answering these questions, in addition to the specific sources listed below.

JOB SKILLS

1. *What skills do I have which might lead me into the mining industry? e.g. basic education, on-the-job skills, prospecting, trades, or business, management, and organizational skills.*

   The important point here is to ask the question, and to answer it honestly, with the help, for example, of Canada Employment or other counsellors. Find Canada Employment Centres in the telephone book Blue Pages.

2. *How can I upgrade my high school education to grade 12 level?*

   Inquire at local high schools, resource centres, or community colleges about courses available. Correspondence courses are also available directly from provincial departments of education. Inquire at Canada Employment Centres about Basic Training for Skill Development (BTSD) programs.

3. *What community college or Department of Education courses are available to upgrade my job skills?*

   Enquire at local school or college, or at Canada Employment Centres, or write to provincial departments of education. Correspondence courses (page 87) may also be of interest.

4. *What apprenticeship programs are available to me? How do I get into apprenticeship training?*

   Apprenticeship training requires employment by an employer who agrees to participate in the 2- to 5-year programs, and provides both on-the-job training and formal classroom instruction in about 250 skilled occupations. Many mining-related skills can be acquired through apprenticeship programs. Federal and sometimes provincial financial assistance may be available to subsidize both training costs and the wages of the trainee. Canada Employment Centres can direct you to employers willing to take apprentices, and to the nearest provincial apprenticeship branch office. Or contact the provincial department directly, using a telephone directory Blue Pages to find the Apprenticeship branch.

5. *How can I get training in business practices and small business management?*

   Inquire at Canada Employment Centres, Federal Business Development Bank (pages 97-98), local high schools, business schools, or community colleges, or university departments of business (pages 113-117).

   In the NWT, inquire at Canada Employment Centres or NWT Employment Centres about the Business Management Program.

6. *What government programs are available in my area to upgrade my job skills?*

   Enquire at Canada Employment Centres, regional offices of DIAND (pages 94-96), and provincial government offices and branches of the Federal Business Development Bank (pages 97-98). Ask for example about the Basic Training for Skill Development (BTSD) programs, tne National Industrial Training Program (page 85), National Institutional Training Program (page 85), and federal assistance in apprenticeship and skills upgrading programs.

7. *Are there special programs to assist native people in acquiring job skills and training that would be useful to me?*

   Enquire at regional offices of DIAND (pages 94-96) or at band offices, or the nearest Canada Employment Centre. See also pages 75-84.

TAXES

1. *What do I need to know about taxes, on and off reserve?*

   Income earned on reserve by individual band members is not taxable. For complicated matters on reserve, and for off-reserve tax information, enquire at local federal income tax offices (use the telephone book Blue Pages), or through toll-free telephone numbers to regional tax offices. Local professionals (accountants, consultants) will help, for a fee (use telephone book Yellow Pages). Excellent books are available in local libraries and bookstores on tax matters, both personal and business. DIAND regional offices (pages 94-96) will advise on special tax circumstances for band members, band-owned companies, and other on-reserve businesses. Tax information bulletin IT 62, available from any regional income tax office (sec telephone book Blue Pages under Government of Canada, Revenue Canada), provides information on special tax conditions for people living on reserve and for income earned on reserve.

TREATY ENTITLEMENTS

1. *How can I find out if employment off reserve will affect my status or benefits?*

   Generally speaking, there is no connection between on-reserve entitlements and employment on or off-reserve; that means, no loss of entitlement benefits because of income earned. Enquire at DIAND regional office (pages 94-96) or band office.

UNIONS

1. *What do I need to know about unions?*

   Ask employers about union connections in the work place; ask other employees; and go directly to the union local (use telephone Yellow Pages, under Labour Organizations) for information about eligibility, membership requirements etc. See pages 111-12 in this sourcebook for basic information on unions.

2. *How can I find out about joining a union?*

   Ask the local union representative, or union members, or employers, or at Canada Employment Centres.

4. EMPLOYMENT

EMPLOYMENT IN AN EXPLORATION PROGRAM

A number of jobs in exploration programs of large or small companies may be available to unskilled workers, with training provided on the job. While most will be on a wage basis, some jobs (e.g. prospecting, claims staking) may be offered on a piece-work basis. Among jobs that may be offered are:

- prospecting (generally, companies will pay a negotiated amount to anyone who brings in an interesting rock sample and can identify the location where it was found. Or, a prospector may be hired on salary, with a bonus for interesting finds.)
- claims staking
- linecutting
- trenching
- geochemical sampling
- geophysical operator or assistant
- labour (assistance to technical experts, or in setting up camp, preparing or maintaining roads, moving equipment, etc.)
- camp support services, such as cooking and maintaining grounds and buildings.

1. *What mineral exploration companies or groups are active or planning to be active in my area?*

   Ask at district mining recorders' office (pages 103-6), Chamber of Mines (pages 108-9), Canada Employment Centres, and Indian Minerals offices (page 94).

2. *What are their job categories and how many of each will be needed? What skill levels are required? Will they be willing to train on-the-job?*

   Ask Canada Employment Centres, company's hiring agent or personnel department, or DIAND's Resource Development Impact Directorate (pages 94-96).

3. *Where can I get training in exploration skills such as line cutting, trenching, etc.*

   On the job with companies or their contractors, or with an Indian Minerals exploration program on reserve.

4. *Where will they be hiring? Is there a local hiring office?*

   Ask Canada Employment Centres or company officials. Sometimes companies recruit from local communities, so ask at community or band offices. DIAND regional offices (pages 94-96) may also be able to advise.

5. *Is there any formal communication between the company and DIAND or other federal departments, or the provincial government, or a band organization, about opportunities for native employment? If so, is there a program or person who can help me with employment opportunities?*

   Ask at band office, DIAND regional offices (pages 94-96) and Canada Employment Centres; ask the company.

6. *Are there any special government training programs planned that will help me to get the necessary skills?*

   Ask at Canada Employment Centres.

EMPLOYMENT IN MINING ACTIVITIES

This can be considered to include both mine development, in which a great many construction jobs are involved, and the production activities, which involves mining skills and skills for support activities such as construction and equipment maintenance.

1. *How do I find out what skills the mining industry or a particular mining company or contractor needs? What jobs are available?*

   Canada Employment Centres, company personnel staff, and Indian Minerals (page 94).

2. *How can I find out what the various job titles mean in terms of kind of work, working conditions, etc.,?*

   From employees, companies, Canada Employment Centres, Indian Minerals staff, DIAND Resource Development Impact Directorate (pages 94-96).

3. *How do I match my skills and interests with mining industry/company needs? (upgrading, training, etc.)*

   Start with Canada Employment Centre, and find out about training opportunities. Check with the company personnel staff and local schools.

4. *How do I find out how a particular mining company hires? (where, who hires etc.)*

   Ask the company personnel department, local hiring officer; ask at Canada Employment Centre.

5. *Are there special arrangements for hiring native people, or local residents?*

   Ask DIAND (pages 94-96) and/or the company. Local hiring policies exist in some areas, so ask at community or band offices.

6. *What do I need to know about unions?*

   See section on unions (pages 111-12), and ask other employees, company officials, and local union members and representatives. Note the differences between development and mining, in terms of union involvement.

7. *How do I decide if the salaries and benefits offered are fair?*

   Discuss with Canada Employment Centre staff and with other employees, but decide for yourself.

8. *Where can I get help with application forms for employment?*

   From the company personnel staff or the Canada Employment Centres that provide the forms, and DIAND regional offices (pages 94-96). Some bands also have employment counsellors or development officers who can help.

5. ENTREPRENEURIAL ACTIVITIES

PROSPECTING

In spite of the emphasis on costly formal exploration programs in the mineral industry, there is still a role for the traditional prospector. He or she may operate within a formal program (i.e. employment), or work independently as an entrepreneur or self-employed business person for a group of backers or a company, or simply keep an eye open for favourable indications of mineralization and interesting rock samples as a hobby or in the course of other activities.

For many of the questions below, separate sources of information will be required for each province and territory, and for on and off reserve. Generally, Indian Minerals staff are the first source of information on-reserve.

1. *Who can be a prospector?*

   Any able-bodied person (over the age of 18, where a licence is required).

2. *Is a licence needed? Where are they available? How much? Where can I get information on regulations?*

   a) On Reserve

   On reserve, no licence is required. For a nonmember of the band, permission from Indian Minerals is required on reserve.

   b) Off Reserve

Province	Licence Required	Cost	Where Licence or Information Available
B.C.	Yes	$25 individual $500 corporate	Ministry of Energy, Mines & Petroleum Resources Parliament Buildings Victoria, B.C. V8V 1X4 and regional offices
Alberta	No	-	Executive Director, Expln. 10,009 108 Street Edmonton Alberta T5J 3C5

Province	Licence Required	Cost	Where Licence or Information Available
Saskatchewan	No	-	Mining Recorder 1914 Hamilton Street Regina, Sask. S4P 4V4 and Mineral Dev. Officer Box 5000 La Ronge, Sask. S0J 1L0
Manitoba	No	-	Mining Recorder 989 Century Street Winnipeg, Manitoba R3H 0W4 (204) 633-9543 and Third & Ross Avenue The Pas, Manitoba R9A 1M4
Nova Scotia	No	-	Roy Slater Joseph Howe Building 1690 Hollis Street Halifax, N.S. B3J 2X1
Newfoundland	No	-	Mining Claims Recorder 95 Bonaventure Avenue St. John's, Nfld. A1C 5T7
New Brunswick	Yes	$5 individual $20 or $50 corp. (depending on assets)	Mining Recorder Centennial Building Fredericton, N.B. E3B 5H1
Québec	Yes	$25	Service permis et baux 1620, boul de l'Entente Québec, Québec G1S 4N6
Ontario	Yes	$5 individual $25, 50, or 100 corporate	Mining Recorders' Offices - see page 104 and OMNR District Office Carleton Place, Ontario
Yukon	No	-	DIAND, Northern Affairs 200 Range Road Whitehorse, Yukon Y1A 3B1
NWT	Yes	$5 individual $50 corporate	DIAND, Northern Affairs P.O. Box 1500 Yellowknife, NWT X1A 2R3

3. *How do you get training to be a prospector?*

Through written information, formal training, and especially through informal or on-the-job training with an experienced prospector. Ask a working prospector; see information in part III about prospecting courses (pages 89-91); read books such as Prospecting in Canada, by A.H. Lang, Geological Survey of Canada and others listed in appendix I, p. 121.

4. *What is a prospector's source of income? of reward?*

a) for an employee, salary or piecework payments; incentive bonuses (e.g. a percentage of discovery, or a fee for every foot drilled, etc.) may also be offered. Ask employer, or Canada Employment Centres.

b) for an entrepreneur, funds to cover expenses can be raised through grubstakes, syndicates, and other forms of contribution from financial backers. Plus, a share of any proceeds of the sale of claims, in the event that they can be sold.

c) Off reserve, the entire proceeds of the disposition (sale) of claims can be considered (taxable) income for the prospector, if the claims are staked in the prospector's own name and there are no other backers or partners.

5. *How do you decide what minerals to look for?*

You have to know about the mineral markets, the area potential, and technical and infrastructure (e.g. transportation) matters. See sources of written information in part III (pages 57-74). Also consult with resident geologists (pages 99-102) and exploration people from companies working in the area.

6. *How do you organize a grubstake? a syndicate?*

Ask working prospectors, exploration companies, Prospectors and Developers Association (page 108), Chambers of Mines (pages 108-9). Legal help may be needed as well.

7. *What equipment does a prospector need?*

Ask working prospectors, or Chamber of Mines; consult written material such as Prospecting in Canada (appendix I), take a prospecting course (pages 89-91).

8. *What regulations govern prospecting in my area?*

Ask provincial mining department officials and district mining recorder. On reserve, consult Indian Minerals. See also publications listed in appendix I.

9. *How can I get help in evaluating interesting samples?*

Many provinces and the territories offer a specified number of free assays each year to licensed prospectors or claim holders. Check with resident geologist's office (provincial governments, pages 99-102); DIAND in the territories (pages 95-96). In Quebec, see also Centre de Recherches Minérales, 2700 Einstein, Ste-Foy, Québec G1P 3W8 (418-643-4504) for free assays. Also ask companies' exploration personnel for help and advice, or pay for the services of an assaying company (look in telephone book Yellow Pages or in regional business directories).

For samples from reserves, ask Indian Minerals staff for help.

10. *How do you stake claims? (i.e. reserve an area of land on which only I or my partners or employees may explore for minerals)*

Check with regulations for your province/territory at provincial mining recorders' offices. Ask at Chambers of Mines or Prospecting associations (pages 108-9), talk to the local mining recorder (pages 103-6) or resident geologists (pages 99-102). On reserve, consult Indian Minerals staff.

11. *How do I keep my claims? What are the assessment requirements?*

Assessment requirements are the value of work performed to keep a claim in good standing, as defined in the mining regulations.

Details are in the mining regulations of the province or territory; summaries are often available from provincial mining departments and their regional offices (pages 99-102); from DIAND in the territories (pages 95-6). Ask district mining recorder (pages 103-6).

12. *How can I profit from claims?*

a) On reserve, ask Indian Minerals

b) Off reserve

- by disposition (sale). Seek expert advice on the value of the property from professionals such as company exploration people, mining recorders, provincial geologists, and other prospectors.
- by further work, which may (or, more likely, may not) find further indications of minerals and therefore increase the value of the claim. Seek expert advice and improve your knowledge through prospecting courses (pages 89-91) and books (page 121).

BEYOND PROSPECTING

Abandoning, maintaining, disposing of, or developing a promising prospect. Remember that, for on-reserve properties, the primary information source is always Indian Minerals.

1. *How can I get advice on which course to follow?*

   Mining recorders, other prospectors and developers, consultants.

2. *If I decide to maintain my claims, how do I do so?*

   Find out the assessment requirements as set out in the mining regulations, and follow them. Information on the requirements is available from mining recorders and government mines departments.

3. *If I decide to try to dispose of my claims (i.e. sell them), whom should I approach for advice, and how do I find potential purchasers?*

   You may first wish to discuss your plans with other prospectors, developers, company and development people. However, do not enter into financial transactions without professional advice from a lawyer, banker, etc.

4. *What do I need if I want to move into detailed exploration on promising claims? How do I figure out my own special requirements?*

   You will need to know about technical, legal, financial, regulatory, tax, and other matters. Discuss with someone already active in such work, and with DIAND regional offices and/or provincial mining offices and find out exactly what requirements must be met and what advice is needed. Then go to the necessary experts - e.g. mining recorders (pages 103-6) for assessment requirement; prospecting courses (pages 89-91) and books (page 121) and other professionals for technical information; other developers, bankers, and other financial experts for fund-raising advice and assistance; all regulatory agencies involved for permits etc. for land use, water use, and other legal requirements; lawyers if contracts or financial arrangements are involved; etc.

5. *Where can I look for financial assistance to finance exploration of my claims?*

   Start with local bank, Federal Business Development Bank (pages 97-98), or contact other prospectors or the Prospectors and Developers Association (page 108) for advice.

6. *How can I get advice on establishing a syndicate or a joint venture or other financing means? (i.e. in order to get maximum financial assistance while keeping as much ownership and control as possible).*

Same as 5 above; legal and possibly accounting advice will also be necessary. See also the book on Mining Exploration Agreements, listed in appendix I, p. 121.

SERVICE AND SUPPLY CONTRACTS

DIAND has a special Business Development division which should be of help in setting up native businesses. The Federal Business Development Bank offers both advice and financial assistance. In addition, there are already numerous successful native businesses operating in the area of mining services, many of which would be useful sources of advice.

This section can apply both to individuals and to bands, on and off reserve, although some of the information sources will vary with these differences.

1. *How can I (or a band organization) find out or anticipate what kind of services might be needed by an exploration or mining company?*

a) Exploration Services

Talk to Indian Minerals, to companies active in the area, to the local resident geologist and mining recorder, to provincial/territorial development offices, Chambers of Mines, to native groups offering similar services in other areas (see appendix II, p. 131).

b) Support Services for Mining Operations

Talk to all the above, and add local Chamber of Commerce, local government offices (municipal or band), banks, local business people, and DIAND regional office or Resource Development Impact Directorate.

2. *How do I (or a band) establish an inventory of skills and capabilities of available manpower?*

Get business counselling from any available sources (see e.g. pages 75-79, 93-119), advice regarding skills classifications from provincial labour departments or education departments, and talk to local schools about local skill levels available. See also counsellors in Canada Employment Centre.

3. *When do I get started? (i.e. at what stage of an exploration or mining project should approaches be made?)*

As early as possible. See pages 57, 72, 73-4, and 107 about information sources on company activities and intentions. Get to know people like resident geologists and mining recorders and company exploration people, so you will be kept informed of possible areas of activity.

4. *How do I decide on a form of organization for my business?*

Your decision will depend on your needs, e.g. for capital, equipment, skills, and manpower, and on the risks involved.

Consult with various government (e.g. DIAND, or provincial small business) departments, and the Federal Business Development Bank (FBDC); eventually you may need a lawyer.

5. *How do I get started?*

First, evaluate your own assets, in terms of skills, contacts, capital, credit etc. Then, approach:

- a) the mineral company for whom you hope to provide a service
- b) a bank or other financial institution
- c) your own office and staff - hiring the required manpower and skills
- d) possible suppliers of equipment or goods or services that you will need
- e) professional advisors on legal and financial and tax matters

6. *What kind of help and advice is available?*

- legal: DIAND district and regional offices (pages 94-96); DIAND Reserves and Trusts Branch; lawyers and consultants.

- financial
  - raising funds to get started: banks, FBDC
  - what do I charge for services: get management and business counselling - from DIAND, FBDC, Schools of Business, etc.
  - bookkeeping - business courses locally or by correspondence

- technical: consultants (pages 118-9), DIAND regional offices, university people

- business management: see, e.g., pages 70-84, 113-117

- mining industry practices and needs: talk to the company in need of the services

- training programs for staff: Canada Employment Centres, local community colleges and schools

7. *What kind of help and advice is available free or subsized, and what should I be prepared to pay for?*

Federal Business Development Bank (pages 97-98) is an excellent source of information on available government assistance, as well as on when expert advice should be hired. FBDB also provides business seminars and instruction courses and books to small and medium businesses. Many university business departments offer low-cost help in business management. All of these sources may provide advice on when and how a consultant should be hired.

8. *What is required for a successful bid? How can I learn the basics of the bidding process?*

All the commercial criteria must be met, such as security deposits and surety, labour and material bonding. Talk to the company, and to the bonding industry (look under Insurance in the telephone Yellow Pages). DIAND Business Development offices may be able to help. Get legal and accounting advice before any documents are signed.

9. *What, if any, legal and/or moral leverage is available to help in securing a contract? Are there special arrangements with the company for native or local employment, contracts, and supplies?*

   Ask at band office, DIAND regional office, provincial development or northern departments, local government offices.

10. *What do I need to know about taxes?*

    On reserve, ask at DIAND district and regional offices. Off reserve, talk to Revenue Canada, tax lawyers or consultants. If you get confusing or contradictory answers, keep asking until you get the problems cleared up.

11. *What are the implications of starting a business for my or the band's financial and other benefits under treaty or the Indian Act or other existing arrangements?*

    Ask at DIAND regional or district office. Generally speaking, employment and business activities do not affect on-reserve entitlements.

12. *What are the conflict-of-interest problems of band members operating a band-owned company?*

    This is presently under consideration by DIAND and the Justice Department. Ask at DIAND regional office for advice, for example about Mineral Surrender requirements and tax status for band-owned companies.

13. *What special circumstances apply to businesses operating on reserve?*

    Special circumstances relate to a number of taxes (e.g. income, sales), and other areas as well. Ask at DIAND district or regional office, especially the Business Development offices staff.

14. *What are the advantages and disadvantages of the various methods of setting up and financing a business: e.g. joint ventures, proprietorship, partnership, incorporation; net carried interest, royalty override, public equity offerings, etc?*

    Ask at DIAND Business Development offices, Federal Business Development Bank; talk to other business people; get accounting and/or legal advice.

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1. INTRODUCTION

Part III provides lists of readily available sources of information, both in books and other written sources, and from organizations and individuals who can provide assistance across a broad range of subjects. Answers to many of the questions raised in Part II can be found in this section, as well as answers to a host of other questions that are bound to arise in the course of pursuing mineral related activities.

2. WRITTEN INFORMATION (see also appendix I, Books, Papers, Reports etc.)

BASIC SOURCE BOOKS

Basic sources of information about mining companies and mineral activities. These can be bought from the publishers, or bookstores, or can be borrowed from government or public libraries. Addresses for obtaining most of these books are given in the section on Organizations and Individuals.

Canadian Mines Handbook, Toronto, Northern Miner Press, annual. 1984-85 price $24.00, 500 pages.
This annual review of the Canadian mining industry provides the names and addresses of more than 2,200 Canadian mining companies, along with names of officers, brief financial information, location and summary information on producing mines, properties under development or being held, as well as exploration programs.

Provincial and federal mines departments are listed, along with professional, mining and trade associations. The Handbook also provides a variety of summary statistics, on production, prices, and stock transactions, as well as maps and other basic information.

The Financial Post Survey of Mines and Energy Resources, Toronto, Maclean Hunter Limited, annual. 1984 price $52.95, 672 pages .
The Financial Post Handbook is similar to the one above, but broader in scope in that it includes information on coal mining and on the oil and gas industry as well as mining.

Mining, Oil and Gas Explained, Toronto, Northern Miner Press, 1979.
This book was developed to explain the basic concepts of mining and of the oil and gas industry to the non-technical reader. Brief and simple explanations are given of the extent of mining world-wide, of elementary geology, prospecting, mine development, the mining phase, and financing and marketing. Oil and gas activities are also described, and a 25-page glossary of common terms is included.

Mining in Canada: Facts and Figures, Mining Association of Canada, annual, free.
This annual publication gives brief accounts of the state of the mining industry in Canada, under headings such as Exports, Employment, Taxes, Research and Development, Environmental Control, Mining Communities, and Provincial Summary. It also provides a number of tables of statistical data on mineral production, wages and salaries, and exports.

Mining: What Mining Means to Canada, Mining Association of Canada, 1985, free.
A clear description for nontechnical readers of the mining industry, the nature of mining activities, and how mining fits into the economy and the social fabric of Canada.

Canadian Minerals Yearbook, Ottawa, Energy Mines and Resources Canada, annual.
Annual report on developments in the Canadian mineral industry. Includes general economic review, regional review, report on ore reserves, statistical report, company index, mineral map, and chapters dealing with individual commodities. Commodity reviews cover Canadian mine development, mining, processing, exports, imports, and consumption; world developments; stocks; prices; technology; uses; and outlook. Commodity chapters are available as individual preprints.

Mineral Facts and Problems, Bureau of Mines, United States Department of the Interior, 1982 edition, 961 pp.
Comprehensive commodity statements, revised every five years for all significant minerals and fuels. Each commodity chapter includes descriptive and statistical information on industry structure, uses, reserves and resources, technology, supply-demand relationships, by-products and co-products, strategic considerations, economic factors and problems, operating factors and problems, outlook, references, and additional sources of information. Commodity chapters available as individual preprints.

Dictionary of Geological Terms, prepared under the direction of the American Geological Institute, Anchor Press/Doubleday, 1960.
The 1960 edition explains about 8500 commonly-used terms in geology and earth sciences. It is intended for use by laymen, hobbyists, and non-technical readers, as well as geology students.

Provincial Geologists Journal, Committee of Provincial Geologists, Volume 1, 1983. $5.00, available from provincial/territorial Chief Geologists.
This publication, the first of an annual series, contains geoscience organization charts for each province and territory, plus summaries of provincial expenditures on geological surveys, the highlights of geological survey programs, and a list of provincial and territorial publications on geological findings and other exploration activities.

Provincial Reports of Activities and Summaries of Exploration Activity - Available from the various provincial and territorial mining departments or geological surveys, generally by year's end or early in the new year.

ABC: Assistance to Business in Canada, Federal Business Development Bank, Suite 1600, 360 St. Jacques Street, Montréal, PQ H2Y 1P5, and offices throughout Canada. Revised annually, free.
A handbook of federal assistance programs designed to assist businesses in Canada, including brief descriptions of the programs, how to apply, and names, addresses, and phone numbers of contact people. Includes a section on programs offered by the Ontario government.

RELEVANT LEGISLATION

This list includes legislation that is particularly significant for mineral exploration and mining-related activities in each jurisdiction. The list is by no means complete, but merely indicates the broad range of regulatory matters involved. It includes both specifically mining acts, as well as other acts and regulations that affect mining operations and companies.

Federal Legislation

In Effect in All of Canada

Atomic Energy Control Act and Regulations (regulates uranium mining)
Explosives Act and Regulations
Clean Air Act (but provincial legislation generally takes precedence)
Canada Water Act
Fisheries Act and Metal Mining Liquid Effluent Regulations
Navigable Waters Protection Act
Income Tax Act and Regulations

In Effect in Certain Areas, or in Federal Agencies

Arctic Waters Pollution Prevention Act
International River Improvements Act
International Boundary Waters Act
National Parks Act
Canada Labour Code Act

In Effect On Reserve

Indian Act (includes provisions for Mineral Surrender), and Indian Mining Regulations
Indian Oil and Gas Act and Regulations

British Columbia

Mines Act
Mineral Act and Regulations
Coal Act and Regulations
Mines Regulation Act
Coal Mine Regulation Act
Environment and Land Use Act
Environmental Protection Act
Environmental Bill of Rights Act 1972
Pollution Control Act 1967
Health Act
Indian Reserve Mineral Resources Act (controls mining on Indian lands)
Mining (Placer) Act and Regulations
Mineral Prospectors Act
Mineral Processing Act

Mining Right of Way Act
Mining Tax Act
Mineral Land Tax Act
Mineral Resurce Tax Act and Regulation
Uranium Moratorium Regulation
Trespass Act

Alberta

Coal Mines Regulation Act
Surface Reclamation Act
Public Lands Act
Environmental Conservation Act
Clean Air Act
Clean Water Act
Public Health Act
Mines and Minerals Act
Right of Entry Arbitration Act
The Coal Conservation Act
The Metallic Minerals Regulation
The Placer Mining Regulation
The Exploration Regulation
The Quarries Regulation Act

Saskatchewan

The Occupational Health and Safety Act, 1977
The Mines Regulations, 1978
The Mines Regulation Act (currently under revision: proposal to replace this act with the Mineral Resources Act, 1985 and the Crown Minerals Act.)
Air Pollution Control Act
The Department of Environment Act, 1984
The Mineral Disposition Regulations, 1985
The Mineral Taxation Act, 1983
The Quarrying Regulations, 1957
The Environmental Management and Protection Act
The Mineral Industry Pollution Prevention Regulations
The Water Corporation Act
Public Health Act
The Heritage Property Act
The Provincial Lands Act

Manitoba

(see also: A Guide to Legislation Affecting the Mining Industry of Manitoba, published by Manitoba Department of Energy and Mines.)

Mines Act
Mineral Disposition Regulations 1981
Mining and Metallurgy Compensation Act
Clean Environment Act
Public Health Act
The Mining Royalty and Tax Act

Ontario

(see also 'A Guide to Legislation Affecting Mining In Ontario', published 1984 by the Ontario Ministry of Natural Resources.)

Ontario Lands Agreement 1928 (related to mining on Indian lands)
Mining Act
Mining Tax Act
Pits and Quarries Control Act
Public Health Act
Environmental Protection Act
Environmental Assessment Act
Pollution Abatement Incentives Act
Ontario Water Resources Act
Public Health Act
Ontario Mineral Exploration Program Act

Québec

Mining Act
Environmental Quality Act
Public Health Act
Mineral Exploration Partnership Act
James Bay and New Québec Agreement and associated legislation

New Brunswick

Mining Act
Health Act
Water Act
Clean Environment Act
Ownership of Minerals Act
Bituminous Shale Act
Metallic Minerals Tax Act
Quarriable Substance Act

Nova Scotia

- Water Act
- Water Amendment Act
- Public Health Act
- Environmental Protection Act
- Environmental Pollution Control Act
- Metalliferous Mines and Quarries Regulations Act
- Lands and Forests Act
- Mineral Resources Act

Newfoundland

- The Mineral Act, 1976
- The Mineral Holdings Impost Act, 1978
- The Regulations of Mines Act
- The Quarry Materials Act
- The Mining and Mineral Rights Tax Act
- Department of Provincial Affairs and Environmental Act, 1973
- Department of Health Act
- Waters Protection Act
- Labrador Lands (Reservation) Act
- Undeveloped Mineral Areas Act

Yukon

Federal Legislation

- Clean Air Act
- Canada Water Act
- Fisheries Act and Regulations
- Indian Act and Regulations
- National Parks Act
- Northern Inland Waters Act
- Territorial Lands Act and Regulations, including:
  - Territorial Coal Regulations
  - Territorial Dredging Regulations
  - Canada Mining Regulations
  - Territorial Land Use Regulations
- Yukon Act
- Yukon Quartz Mineral Act
- Yukon Placer Mining Act

Territorial Legislation

- Area Development Ordinance

Northwest Territories

Federal Legislation

Clean Air Act
Canada Water Act
Fisheries Act
Indian Act
National Parks Act
Northern Inland Waters Act
Territorial Lands Act and Regulations, including:
  Territorial Coal Regulation
  Territorial Dredging Regulations
  Canada Mining Regulations
  Territorial Land Use Regulations
Northwest Territories Act

Territorial Legislation

Commissioner's Land Ordinance
Environmental Protection Ordinance

MAPS AND GEOLOGICAL INFORMATION

Detailed information on the geological potential and known mineral occurrences and development activies.

Canada-Wide Sources

National Mineral Inventory (NMI), Mineral Policy Sector, Energy, Mines and Resources Canada, 580 Booth Street, Ottawa K1A 0E4. Can provide:

1. Mineral occurrence records, by deposit or deposit groups across Canada.
   An open file of some 19,000 mineral deposit records compiled and maintained by geologists. Information available on large cards in standard format for each mineral occurrence including a narrative factual summary of exploration and development work, production (if any), a geological description, and details on location, ownership, and references. Computer printouts provide indexes and access pointers through the use of key characteristics. Copies can be obtained by a request through the mail, or the records can be examined in Ottawa.

2. Tonnage-grade estimates and production, by deposit.

3. MR198, Canadian Mineral Deposits Not Being Mined in 1983.

4. MINSYS computer index:
   a) custom index to deposits
   b) custom deposit location plots.

Geological Maps, Reports, Air Photos etc.

Geological Survey Library and
Publications Office (books and geological maps)
Geological Survey of Canada
Department of Energy, Mines and Resources
601 Booth Street
Ottawa, Ontario K1A OE8

Canada Map Office (topographic and other maps)
Surveys and Mapping Branch
Department of Energy, Mines and Resources
130 Bentley Ave.,
Ottawa, Ontario K2A 6T9

The Director, Surveys and Mapping Branch (maps, charts, air photographs, technical information)
Dept. of Energy, Mines and Resources
615 Booth Street
Ottawa, Ontario K1A OE9

Geological Survey of Canada
Institute of Sedimentary and Petroleum Geology
3303 - 33rd Street N.W.
Calgary, Alberta T2L 2A7

Geological Survey of Canada
Cordilleran Geology Division
100 West Pender Street
Vancouver, British Columbia V6B 1R8

Geological Survey of Canada
Atlantic Geoscience Centre
Bedford Institute of Oceanography
P.O. Box 1006
Dartmouth, Nova Scotia B2Y4A2

Indian Affairs and Northern Development Canada
Public Enquiries and Response Division
Communications Branch
Ottawa, Ontario K1A OH4
and
Indian Minerals Directorate
Ottawa, Ontario K1A 0H4

Supplies and Services Canada (all government publications)
Printing and Publishing
Hull, Québec K1A OS9

and authorized bookstores (see appendix III)

Provincial Mineral Deposit Records and Geological Maps
(for addresses of all provincial mining departments and regional offices, see pp. 99-106)

British Columbia - Geological Branch, Ministry of Energy, Mines and Petroleum Resources,
Parliament Building, Victoria, B.C. V8V 1X4
(604-387-5975)

1. Regional and local geological, geochemical, and aeromagnetic survey reports.
2. Geological mapping
   - coal resources
   - metallic and nonmetallic mineral resources
   - mineral deposit land use
3. Mineral, placer, and coal title reference maps
4. Geological Data Base Systems
   - B.C. coal inventory file
   - B.C. mineral inventory file (MINFILE) - includes year-by-year production and reserve figures by mineral occurrence
   - B.C. mining assessment report file
   - Mineral title data computerization
5. District geologists are available for consultation
6. Publications List

Alberta - Alberta Research Council
Alberta Geological Survey (AGS)
3rd Floor, Terrace Plaza
4445 Calgary Trail South
Edmonton, Alberta T6H 5R7

1. Maps and geological information
   Exploration Branch (403) 427-6602
2. Mineral deposit records including assessment reports, drill hole logs, AGS.
3. Province-wide inventory of virtually all important mineral commodities, including commentary on extent, reliability, quantity and quality of information collected to date. Contact Metallic and Industrial Minerals Inventory, (403) 427-7222

Saskatchewan -Mineral Development Section, Saskatchewan Energy & Mines, 1914 Hamilton Street, Regina, Sask. S4P 4V4 (306) 787-2576.

1. Saskatchewan Mineral Deposits Index
   a) computer printout by commodity in a consecutive manner by NTS sheet (complete or partial printouts available)

   b) computer printout by NTS sheet (all commodities) (complete or partial printouts available)

   c) blueline copies of mineral index location maps

   d) computer plotted mineral index maps for any commodity or combination of commodities are available in a variety of scales

   e) mineral deposit index is available in computer tape.

2. Mineral Assessment File
   - this file contains reports on exploration work submitted for assessment credit that have been made publicly available. It includes drill hole records and logs, maps and reports of geological, geophysical and geochemical surveys, assays, analyses, and test results

   - copies of these files or portions of these files available on a fee-per-page basis.

Saskatchewan Energy and Mines, Publications Office, 1914 Hamilton Street, Regina, S4P 4V4 (306)787-2528

- departmental reports, maps and publications
- some additional reports on Saskatchewan by other agencies
- these publications are also available in the field offices
  P.O. Box 5000, La Ronge, S0J 1L0 (306) 425-4498
  P.O. Box 70, Creighton, S0P 0A0 (204) 687-6466

Saskatchewan Environment, 3085 Albert Street, Regina S4S 0B1
(306) 787-6113

Issues a number of guidelines relevant to mineral exploration:
a) Mineral Exploration Guidelines
b) Guidelines for Environmental Protection During Mineral Exploration in Northern Saskatchewan
c) Guidelines for Environmental Protection During Road Building
d) Guidelines for Development and Rehabilitation of Sand and Gravel Pits
e) Guidelines for the Submission of a Project Approval
f) General Guidelines for the Preparation of an Environmental Impact Statement.

Manitoba - Manitoba Energy and Mines, Mineral Resources Division,
Geological Services Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba R3C 4E3 (204) 945-6559

1. Mineral inventory and deposit maps, with computerized index, microfiches available.
2. Report of provincial Field Activities
3. IMP computer file - printouts of reserve and production figures by deposit.
4. Economic Geology Reports: e.g.:
   ER 79-1, Evaluation of Massive Sulphide Potential in Manitoba
   ER 79-6, Mineral Inventory of Manitoba
5. Open file reports on known mineral occurrences
6. Drill Core Libraries throughout province
7. Geological Services and Mines Branches Publications Price List (annual)

Ontario - Geoscience Data Centre, Ontario Geological Survey,
77 Grenville Street, Room 804, Toronto, Ontario M5S 1B3
(416) 965-4641 and
Public Service Centre, W-1640, 99 Wellesley Street, Toronto, Ontario M7A 1W3 (416) 965-1348

1. Assessment Files Research Office - central depository of exploration reports, files, drill hole logs, an assessment reports in Toronto. Available on microfiche at Sault Ste. Marie and Sudbury resident geologist's offices.
2. Geoscience index data base and computer accessible data bases, by occurrence, commodity, location, etc.
3. Mineral deposit files - information on location, geology, etc. on more than 7,000 deposits.
4. Mineral publications - more than 4,000 items on geology, rocks, minerals, mineral deposits, geophysics, geochemistry etc. for sale.
5. Mines Library - maps, books, periodicals, reports, etc.
6. Drill core libraries at Bancroft, Kirkland Lake, Sault Ste. Marie, Timmins and Tweed.
7. Regional geologists and staff available for consultation at all regional offices.

Québec - Ministère de l'Energie et des Ressources, 1650 Boul.
de l'Entente, Québec (Québec) G1S 4N6 (418-643-8167).

1. Fiches de Gite - records of individual mineral occurrences for the whole province.
2. Cartes des ressources minérales - mineral resource maps, showing plots of occurrences on geological bases at 1:250,000 scale (larger in crowded areas).
3. Production minérale au Québec, DPV-727, 1979; by mine, with accompanying map showing plots of existing and former mines (to be republished periodically).
4. Inventaire des gisements minéraux du Québec, DPV-7-7. 1979 tonnages and grades by deposit; accompanying map; to be republished.
5. L'industrie minérale du Québec. Annual publication, free. Annual report on mineral exploration, research, new mine development, and commodity production.
6. Data bank on mineral exploration projects of various companies.
7. Remote access (by teleprocessing) to geoscentific data.
8. Geologists available for consultation at regional offices.

New Brunswick - Assistant Deputy Minister, Mineral Resources,
Dept. of Natural Resources, P.O. Box 6000,
Fredericton, N.B. E3B 5H1 (506) 453-2206)

1. Geoscentific data base - maps and reports. Mineral deposit studies and resource reports for most minerals occurring in the province.
2. Core libraries at Sussex, Fredricton and Bathurst regional offices.
3. Assessment files and reports provided by mining and exploration companies - at regional offices and all major public libraries in the province.

Nova Scotia - Nova Scotia Department Mines and Energy, P.O. Box 1087
Halifax, N.S. B3J 2X1 (902) 424-4161)

1. Mineral data base including mineral inventory records and geological maps, mineral deposit studies, and other geoscientific information.
2. Drill core and assessment files.

Newfoundland - Publications and Information Section
Department of Mines and Energy, P.O. Box 4750
St. John's, Newfoundland A1C 5T7 (709) 737-3159).

1. Assessment files and other information on geology and mineral resources of Newfoundland and Labrador
2. Mineral occurrence data system:
   a) mineral inventory (to National Mineral Inventory standard, with detail added).
   b) computerized index.
3. Drill core, in three regional libraries.
4. Publications List.

5. The publication and information section of the Department of Mines and Energy has a mineral exploration consultant on staff. The geoscience staff is also available for discussions with interested parties.

Yukon -Canada Map Office, Geology Branch
DIAND, 200 Range Road
Whitehorse, YT, Y1A 3V1

1. Yukon Exploration and Geology, (DIAND, Yukon regional office, $10) An annual report with papers on the geology of the territory, a listing of every claim and property, plus details of work on every property worked on over the year.
2. GSC and DIAND geological reports, maps, and geological interpretations; air photos.
3. Indexes and maps for both quartz and placer claims, showing current status.
4. Assessment reports for lapsed claims.
5. Drill core library.
6. Geologists on staff for consultation.

Northwest Territories - Minerals and Economic Development, DIAND
Box 1500, Yellowknife, NWT X1A 2R3

1. Mineral Industry Report
   An annual overview of mineral exploration, mineral properties and development, and mining in the NWT.
2. Open file reports, maps for GSC and DIAND
3. Indexes and maps for mining claims showing current status
4. Old assessment reports
5. Drill core library
6. Geologists on staff for consultation

DIRECTORIES

This section provides names and sources of a wide variety of lists of names, titles, departments, etc. of individuals in companies, government and other offices and organizations involved with mineral activities.

General

Local Telephone Directories. Each local directory includes a Blue Pages section, which lists all government offices in the area covered and, in many cases, offices outside the area but serving it.

Corpus Almanac of Canada, published by Corpus, 1450 Don Mills Road, Ontario M3B 2X7. 1985 price $98.00. Available in many libraries and some government offices. Lists a wide range of organizations, including names of individuals, departments, and mailing addresses. Among the organizations listed are libraries, associations and societies, newspapers, schools (elementary, secondary, technical, universities and colleges, continuing education etc.), labour organizations, and federal provincial, territorial and municipal governments. There are also explanatory articles on the constitution, citizens' rights, business law, types of business organizations, business regulations, banking and finance, stock exchanges, taxation (all jurisdictions, corporate and personal income tax, other taxes), and labour unions, and native organizations.

Government Telephone Directories

Government telephone directories are extremely useful resources. They provide a picture of the various branches and agencies within each department, as well as the names and phone numbers of individuals, identified by their responsibilities. However, it must be remembered that the information in these directories may be out of date, because of departmental reorganizations or personnel changes. Many individual government departments or branches will also supply a list of names, titles, and phone numbers of all or a significant number of their staff. Where government directories are not available, or to supplement them, local telephone Blue Pages provide useful lists of government departments and services, with phone numbers and addresses.

Addresses for borrowing or in some cases obtaining your own copies of government telephone directories are given below:

Government of Canada

Government of Canada Telephone Directory
Department of Supply and Services
Queen's Printer
45 Sacré Coeur Blvd.
Ottawa, Ontario K1A 0S9
or telephone 819-997-2560

Directory for Department of Indian Affairs and Northern Development (DIAND), including regional offices.
- available in DIAND regional offices - see pp. 94-96 for addresses.

Saskatchewan

Saskatchewan Energy and Mines, Inquiries (306) 565-2526

The Department of Energy and Mines also publishes a brochure titled Geological Services which is a short directory of services provided for mineral and petroleum explorationists working in the province. It includes names, titles, and phone numbers of government people.

Ontario

Ontario Telephone Directory and New Kuric Index to Government of Ontario
Ministry of Government Services, Publications Services,
5th Floor, 880 Bay Street
Toronto, Ontario M7A 1N8

Québec

Répertoire téléphonique du Gouvernement du Québec 1984-85
Québec, Ministère des Communications
675, St-Amable
1er étage
Québec, Québec G1R 2G5
(418) 643-6541

Nova Scotia

Nova Scotia Government Telephone Directory
Government Bookstore
Box 637
Halifax, Nova Scotia B3S 2T3

Newfoundland

Property Management Division
Department of Public Works and Services
Confederation Building, P.O. Box 4750
St. John's, Newfoundland A1C 5T7

Yukon

Available from: Yukon Government building in Whitehorse.

Other Mining-Related Directories

Provincial Geologists Journal. Committee of Provincial Geologists, Volume 1, 1983. $5.00, available from all provincial/territorial Chief Geologists. Volume 1 of this annual publication contains geoscience (i.e. provincial geological services) organization charts for each province and territory, including titles, names, and phone numbers.

CIM Directory. The CIM Directory is published annually by the Canadian Institute of Mining and Metallurgy, 400-1130 Sherbrooke St. W., Montreal, PQ H3A 2M8
The directory includes an alphabetical listing of all individual CIM members (i.e. geologists, mining engineers, metallurgists, and other mineral industry professionals), as well as its corporate members (i.e. companies), and information on the organization and officers of the institute.

B.C. and Yukon Chamber of Mines Directory. Published annually in the January/February issue of Mining Review (see below, subscriptions), this directory lists chamber members, mining companies, equipment suppliers, contractors, government offices etc. in B.C. and the Yukon.

Who's Who in Mining, Directories North, 47 Pine St. South, Suite 202 Timmins, Ontario P4N 2J9
An annual publication covering northern Ontario and northern Québec. It lists operating mines and sources of services and supplies, government programs, mining and exploration etc.

Yukon Business Directory. Published jointly by the Yukon Government and the Whitehorse Chamber of Commerce, and available from the Department of Mines and Small Business, Box 2703, Whitehorse or the Chamber, 302 Steele Street.
This directory includes business, industrial, and resource development firms, government agencies, and associations which focus their activities in the Yukon.

Professional Directories

These will provide lists of qualified professionals and/or firms in a variety of fields, including mailing addresses and sometimes telephone numbers. Professions such as professional engineers, accountants, managements consultants are regulated by the provinces, and generally issue provincial directories. Names of lawyers who specialize in mining law are available from the Canadian Bar Association, and can be obtained through local law offices.

SUBSCRIPTIONS

Newspapers and journals with information on mineral industry activities.

The Northern Miner, Northern Miner Press Limited, Toronto.
Weekly newspaper of current events and commentary on Canadian exploration projects and results, mine developments, mining operations, and other mining company activities. Good source of technical, economic, and financial information on mining with emphasis on Canada.
Available from: The Northern Miner
Circulation Sales Department
7 Labatt Avenue
Toronto, Ontario Canada M5A 3P2
1984 price $40 per year.

CIM Bulletin, The Canadian Institute of Mining and Metallurgy, Montreal.
Monthly technical and professional journal containing technical articles related to mining, metallurgy, and mineral related issues including taxation and management. Also contains news items and information on CIM activities and other professional meetings. Available (to non-members on a subscription basis) from: The Canadian Institute of Mining and Metallurgy
400 - 1130 Sherbrooke St. West
Montreal, PQ Canada H3A 2M8

Canadian Mining Journal, Southam Business Publications, Toronto
A monthly business journal containing news articles on company activities in mine development, mining, mineral processing, mining equipment, marketing etc.
Available from: Canadian Mining Journal
1450 Don Mills Road
Don Mills, Ontario Canada M3B 2X7
1984 price $35 per year.

The Canadian Mineral Industry Monthly Report, Energy, Mines and Resources Canada.
A monthly summary of important current developments in or affecting the Canadian mineral industry. Includes production statistics by commodity, and major economic indictors. Free.
Available from: Mineral Policy Sector
Energy Mines and Resources Canada
580 Booth Street
Ottawa, Ontario Canada K1A 0E4

North of 60, Mines and Mineral Statistics, DIAND
A monthly publication listing all claims recorded and tranferred, all development work, mineral production, details of leases, representation work, royalties paid, and prospector's assistance, for the Yukon and Northwest Territories for the month.

Mining Review, Naylor Communications Ltd. for the B.C. and Yukon Chamber of Mines.
A review of mining news and current developments affecting mining in B.C. and the Yukon published 6 times per year. Includes the Directory

in the January/February issue. Available with membership in the B.C. and Yukon Chamber of Mines ($15 individual), 840 West Hastings Street, Vancouver, B.C. V6C 1V8

Mining Engineering
American Institute of Mining, Metallurgical & Petroleum Engineers
Caller No. D
Littleton, D.C.
80127 USA

Engineering and Mining Journal
P.O. Box 430
Highstown, N.J.
08520 USA

Financial Times of Canada
920 Yonge Street, Suite 500
Toronto, Ontario M4W 3L5

The Financial Post
Maclean Hunter Limited
Maclean Hunter Building
777 Bay Street
Toronto, Ontario M5W 1A7

North American Gold Mining Industry News
P.O. Box 662
Wilsonville, Oregon 97070
$45 U.S. bulk $70 U.S. 1st class mail.
Published biweekly, contains a mixture of industry news including new mining developments, new products and technological advances, and historical perspectives and financial news.

3. ASSISTANCE PROGRAMS

FEDERAL ASSISTANCE PROGRAMS

Employment and Immigration Canada

Major regional offices in Vancouver, Edmonton, Regina, Winnipeg, Toronto, Montreal, Halifax, Charlottetown and St. John's, and Canada Employment Centres throughout the country. Find them in the Blue Pages of local telephone directories, listed under Government of Canada; Employment and Immigration Canada Employment Centres; Employment Services. Canada Employment Centres are found in all cities and most smaller communities across Canada.

1. National job bank - a computerized list of jobs available across the country, including jobs in mining. Contact Canada Employment Centres (CECs)

2. National Training Programs - assists in acquiring skills, through apprenticeship and other training programs. Contact CEC.

3. National Industrial Training Program - subsidizes on-the-job training through funding for training costs and part of trainees' wages. Contact CECs. See also page 85.

4. National Institutional Training Program - subsidizes community colleges and other training centres for basic academic courses (grades 7 to 12) and skills training. Contact CECs. See also page 85.

5. Canada Northwest Territories Human Resource Development and the Appropriations Act

   These programs apply specifily to the NWT.

   Business Management Program

   Objective - to enhance management capability within northern businesses, and to provide developmental opportunities to enable people of the NWT to secure employment as business managers.

   Options North Program

   Objective - to encourage and support native northerners in overcoming the numerous barriers they face in participating in the wage economy, by the implementation of special support mechanisms designed for their needs.

   For further information, enquiries should be directed to local Canada Employment Centres by employers groups associations which are prepared to develop projects.

6. Canada Works Program

(consists of constituency or special regional allocations and Section 38 of the U.I. Act).

- for laid off workers in receipt of U.I. benefits, workers who have exhausted U.I. benefits, social assistance recipients, and other unemployed persons.
- mining-related projects have been funded under this program, which would be used in this context for preproduction development work, or reclamation after closure, but not for mineral production.
- sponsors may be organizations, businesses and individuals, federal and provincial/territorial government departments, and municipalities where the provincial government raises no objection.

Funding

- for constituency and special regional allocation; up to $325 per week maximum.
- for Section 38 U.I.; up to $315 per week from the U.I. account, plus $125.00 to the employer, from the federal Treasury for overhead and administrative costs.

7. Local Employment Assistance Development (LEAD)

Designed to assist community-based entrepreneurial development programs in depressed areas, LEAD provides the forum and financial incentive for economic development in communities of fewer than 50,000 people through creation of LEAD projects and Corporations (for community groups including Indian Band Councils). Proposals are submitted to Canada Employment and Immigration Commission (CEIC) through the local Employment Development Branch Office.

Funding (annual levels)

- planning projects, up to $100,000 (duration 1 year)
- infrastructure projects, up to $350,000 (duration 2 years)
- enterprise projects, up to $350,000
- corporations - operational funding up to $130,000
  - employment development up to $220,000

8. Job Corps Program

The program responds to the unemployment problems of severely employment-disadvantaged individuals who are unable to secure and retain employment for reasons including lack of education, training, job experience or mental/physical disabilities.

Referrals of participants must take place through Canada Employment Centres and/or other organizations as authorized by a designated official of the CEIC.

Organizations, businesses and individuals are eligible to become employers under the program. Municipalities and school boards are eligible to become employers if the appropriate provincial government raises no barrier. Federal and provincial government departments and agencies are not eligible to become employers.

Groups, agencies, associations or businesses are eligible to provide assistance in the delivery of the program at a national level.

Funding includes wages for core staff and participants, and contribution towards operating costs.

9. Career Access Program

Offers assistance for unemployed individuals, for disabled or employment-disadvantaged people, for men and women returning to the work force after prolonged absence, and for older workers who have been permanently laid off, under certain specified circumstances.

Employers (businesses, private organizations, and community groups) apply through Canada Employment Centres.

Funding varies, but generally is about 50 percent of gross wages with a maximum upper limit per employee.

The federal government decided late in 1984 that, in recognition of the seasonal and uncertain nature of employment in mineral exploration, applications for temporary employment in mineral exploration will be accepted under this program - i.e. for the field season rather than permanent jobs.

Other Federal Assistance Programs

Native Economic Development Program - DRIE

A 4-part program under the Department of Regional Industrial Expansion (DRIE). $345 million has been allocated to this program.

Element I	Development of native economic and financial institutions through an infusion of capital, so they can provide the equity, venture capital, loans, management and technical advice, and other measures necessary to assist Aboriginal business development.
Element II	Assistance to community-based economic development (A limited number of communities will be selected).
Element III	Special projects provides support for investment opportunities in five categories: - scholarship programs - innovation - research and marketing - special studies - high priority projects not eligible for other government programs

Element IV Coordination of other federal programs of assistance, to maximize their accessibility and impact.
Proposals or requests for proposal outlines can be submitted by eligible native organizations to:

Native Economic Development Program
Suite 1103 - 330 Portage Avenue
Winnipeg, Manitoba R3C 0C4

Indian Economic Development Fund - DIAND

The fund provides a source of capital to ensure that Indian businesses have access to basic financing and to the managerial, professional, and technical services necessary for the successful operation of their enterprises.

Financing is available to Indian bands, individuals, and businesses in a variety of economic activities including resource development. Assistance may take the form of loans, contributions, guarantees, and management advisory services.

Applications should be submitted to the Resource, Economic and Employment Development Branch of DIAND either at Ottawa or in the main regional office in each province or territory. The program has been capitalized at $70 million.

Indian Minerals (East) and (West) - DIAND

Limited technical assistance and advice is provided free of charge to native prospectors by the Indian Minerals offices. Indian Minerals also conducts exploration programs on reserve at the request of the band.

Territories - DIAND

DIAND Regional offices in Yukon and the Northwest Territories offer a number of services related to employment, business development, and mineral activities that parallel many of the provincial services described below.

In Whitehorse, Yukon, for example see:

Indian and Inuit Affairs
  Information Services
  Economic Development

Northern Affairs
  Non-Renewable Resources
  Resident Geologist

In Yellowknife, NWT, see

Indian and Inuit Affairs
  Economic Development

Northern Affairs
  Minerals and Economic Analysis
  Resident Geologists

Federal Business Development Bank (FBDC) (addresses of local offices on pages 97-98)

Financial services: term loans, loan guarantees, financial planning, investment referrals, do-it-yourself business kits, financial proposal service for small businesses.

Management services - business counselling, training and information services for small businesses:

- Counselling Assistance to Small Enterprises (CASE)
  Retired business people advise on all areas of business management, including accounting, marketing, production and personnel.
- Business Management Seminars on topics such as bookkeeping, personnel, marketing, taxation, and finance.
- Management Clinics - self-teaching courses using video cassettes and workbooks.
- Owner/Manager courses, distributed by provincial and territorial departments of education, for improving management skills. Case study method.
- Minding Your Own Business - a series of pocketbooks covering the important steps of running a successful business.
- Small Business Information Service - free advice to small businesses on assistance and other programs from all levels of government.

Federal Telephone Referral Service (TRS)

TRS provides telephone information on federal government programs and services. Information is available in each province and territory through toll-free 800 or zenith telephone numbers. TRS officers answer general questions, and refer more complex questions to the appropriate authority in federal departments and agencies.

A complete listing of these free phone numbers is given on pages 98-99.

PROVINCIAL ASSISTANCE PROGRAMS

Listed below is a variety of provincial programs which may provide assistance to individuals or companies who wish to become involved in mineral activities. The assistance may be directly related to mining, or may be indirect, such as educational or small business assistance. For further information about these programs and any additional ones that are not included, contact the departments directly, either through the lists provided in this book or using the Blue Pages of the telephone directory.

British Columbia

Department of Energy, Mines and Petroleum Resources

Training programs for prospectors and advanced mineral exploration (see page 89). Contact Applied Programs, 604-387-5538

Mineral Economic Intelligence Programs
- production information
- price forecasts
- tax study
- cost-benefit project assessments

Contact Mineral Policy and Evaluation Branch, 604-387-3787

Dept. of Industry and Small Business Development

Marketing Support Programs
- trade missions and marketing information
- business and financial counselling

Contact Trade and Industry Division, 604-689-4411

Alberta

Ministry of Economic Development

1. Program of incentives and assistance for the establishment of mineral-related businesses in Alberta
   Contact Manufacturing Industries Branch
   9940-106 Street, Edmonton (403) 427-8825

Saskatchewan

General information source on native employment and business development opportunities:

Northern Affairs Secretariat
1855 Victoria Avenue
Regina, Saskatchewan S4P 3V5
(306) 787-2907

Some retraining assistance is available through:
Advanced Education & Manpower
Box 5000
La Ronge, Saskatchewan S0J 1L0
(306) 425-4393

Some of the local mining companies offer student bursaries

Further information may also be obtained from:
The Gabriel Dumont Institute of Native Studies and Applied Research
121 Broadway Avenue East
Regina, Saskatchewan
(306) 522-5691

Ontario

Ministry of Colleges and Universities

A number of educational programs are offered that would be of interest to people wishing training in mining related activities. Courses are offered at community colleges, and on-the-job training, including apprenticeship, receives provincial support. For example:

- apprenticeship programs
- Colleges of Applied Arts and Technology (includes courses in drilling, blasting, and surveying)
- National Industrial Training Program - (a federal/provincial program) provides wage supplements for skills training. Contact Canada Employment Centre, or local Ontario government office.
- Ontario Modular Training System - includes training in a number of mining-related skills
- Ontario Training Incentive Program and Ontario Career Action Program - subsidies to employers for on-the-job training

Ministry of Industry and Trade

Small Business Counselling: Contact Ontario Development Corporation in Toronto 416-965-4622 or at regional office

Ministry of Natural Resources

Ontario Mineral Exploration Program: tax credits and grants for mineral exploration in Ontario
Contact OMEP office, 416-965-9955

Small Rural Mineral Development: grants to assist expansion or development of industrial mineral operations
Contact Industrial Minerals Section, 416-965-3127

Ministry of Northern Affairs

Employment Incentives Program: interest-free forgiveable loans for small business operations start-up or expansion
Contact NORDEV, Sudbury, 705-675-4441 or Toronto 416-965-1417

Industrial Infrastructure Program for small businesses such as quarrying or mineral processing
Contact NORDEV, Sudbury, 705-675-4441 or Toronto 416-965-1417

Resource Diversification and Development Program: grants for consultant studies and demonstration projects in natural resources
Contact J.H. Sellers, Sault Ste Marie, 705-949-1231

Northern Community Economic Development Program

Northern Ontario Regional Transportation Committee: subsidies for resource roads

Northern Priority Roads Programs: capital funds to facilitate highway access to resources

Québec

Ministère de l'Energie et des Ressources, Secteur Mines

'Ad hoc' Assistance Program for Techno-Economic Studies - subsidizes feasibility studies in the mining sector.
Contact Service des analyses Commerciales et des projets miniers, 418-643-7760

Private Investment Incentives Program - subsidies for new development projects, designed to speed up the development stage.
Contact given above.

Assistance Program for the Development of Stone Quarries - subsidies for new quarries or for expansions of existing quarries.
Contact Service des analyses commerciales et des projets miniers, 418-643-4896

Assistance Program for Construction of Access Infrastructure for the Mining Industry - subsidies for roads and other transportation needs.
Contact service de l'assistance a l'industrie minière, 418-643-3795

Access to Information on Various Assistance Programs for the Mining Industry - available to prospectors, geologists, and mining company representatives. Provides information on technical and financial assistance available from both the Québec and the Canadian governments.
Contact, MER regional offices in Quebec City, Sept-Iles, Ste-Anne-des-Monts, Chibougamau, Rouyn-Noranda, and Val-d'Or - Amos (addresses on page 105).

Regional Access to Information on Mining Rights - informs about the requirements of the Mining Act, issues prospector's licences, grants and renews mining rights etc.
Contact regional offices shown above.

Reduced rates on techical assistance for mineral exploration, mineral assays, and other mineral-related services for prospectors and others.
Contact Centre des recherches minérales, 418-643-4504.

Nova Scotia

Department of Mines and Energy

Mineral Development Assistance, for all individuals and companies interested in establishing mineral-related industries in Nova Scotia.
Contact Department of Mines, Mineral Development (902) 424-4995.

Department of Development

Business assistance - grants and loans for establishment of mineral-related businesses, for companies with mineral properties in Nova Scotia.
Contact Dept. of Development, 902-424-8920

Nova Scotia Resources Ltd.

Joint ventures with companies holding mineral properties. Nova Scotia Resources will negotiate financial and technical contributions.
Contact Nova Scotia Resources, 902-429-2860

Newfoundland

Department of Mines and Energy

Mine Development Assistance - requests for infrastructure assistance, loans, or grants will be considered on a case-by-case basis.
Contact Deputy Minister's office, 709-737-2766

Department of Manpower and Labour

Assistance in setting up specialized training programs for employers

Apprenticeship programs: contact 709-737-2729 or local field offices of Department of Manpower and Labour.

Newfoundland and Labrador Development Corporation (NLDC)

Loans and equity participation for small businesses, as well as advisory services.
Contact NLDC, 709-753-3560.

Northwest Territories

Department of Renewable Resources, Government of the Northwest Territories (GNWT)

Bear Detection and Deterrent Program as a service to industrial sites or communities.
Contact Habitat Management, 403-873-7765

Department of Education, GNWT

Apprenticeship program.
Contact coordinator of apprenticeship program, 403-873-7367

DIAND: see pages 78-79.

Yukon

Department of Community and Transportation Services, Yukon Government

Northern Exploration Facilities Program (NEFP) provides financial assistance for construction of tote trails, airstrips etc. for access to mineral exploration and development.
Contact Highway Engineering, 403-667-5456

Department of Education, Yukon Government

The Youth Employment and Training program provides employment and training opportunities for Yukon post-secondary graduates, and work experience for recent high school graduates. Funding of almost $150,000 has been allocated to the program, to provide wage subsidies to employers. Eligible employees include private sector businesses, non-profit organizations, and Indian bands.

Apprenticeship Program and industrial training: see industrial training coordinator, 403-667-5133.

DIAND: see pages 78-79.

4. INSTRUCTION COURSES

FORMAL TRAINING

Canada Employment and Immigration Commission - Training Programs

National Industrial Training Program

The program has two components:

General Industrial Training (GIT)
- training of adults with special needs.

Critical Trades Skills Training (CTST)
- trains workers for skill shortages of national importance. These are normally in the higher skills.

National Institutional Training Program

The National Institutional Training Program, in cooperation with provincial and territorial governments, helps satisfy the need for skills training, apprenticeship training, language training where necessary to obtain employment. It also includes Basic Training for Skill Development (BTSD).

Basic Training For Skill Development fills the gaps in education which may be preventing you from acquiring further training and skills development. BTSD covers Grades 7 to 12 and is designed to prepare you for specific occupational skills.

Further information on CEIC training for mining-related occupations may be obtained from your nearest Canada Employment Centre.

Provincial and Territorial Departments of Education

High school and continuing education programs

These will provide academic requirements, up to grade 12, that are usually prerequisites for any employment or for further training.

Community colleges

Community colleges provide both formal courses and occasional courses related to mining activities. For example, Northern College in Ontario has a number of campuses in mining communities, including the Haileybury School of Mines at Haileybury. In addition to the mining courses at Haileybury, short courses are offered at other campuses in subjects including prospecting and geology. Some community colleges offer specialized courses such as explosives and blasting.

Community colleges in all jurisdictions may offer courses in mineral-related subjects for which there is sufficient demand, for example from a community or from a band. Such courses may be given in conjunction with other agencies, such as provincial geologists or prospectors' associations.

Apprenticeship programs

These provide formal training, largely in an on-the-job (and paid) setting, which leads to certification in a trade or skill. There are many trades with such programs, and even within provinces the educational requirements for admission may vary from grade 8 to grade 12, depending on the trade involved.

Enrollment in an apprenticeship program requires a 3-way agreement, between the individual who wishes to enroll, an employer who is willing to participate, and the provincial government's apprenticeship branch office. Canada Employment Centres can assist in locating employers willing to participate in apprenticeship programs, and can also direct applicants to the nearest provincial apprenticeship branch office.

Some trades have interprovincial standards, which permit a successful candidate to practice his trade in any province in Canada without further examination or training.

The Province of Manitoba has designated the job of miner as a trade. It has consequently established apprenticeship training for miners and has set a uniform basic level of skills for the trade. Manitoba's 3-year training program, which includes 16 weeks of classroom attendance, enables the miner to earn his journeyman papers following a successful completion of the trade qualification examination given by the province. The program sets standards that should facilitate transfers between jobs and between different mine sites.

Among the dozens of other trades that might be of interest for mining-related employment are:

- construction millwright
- electrician
- plumber
- sheet metal worker
- industrial millwright
- carpenter
- heavy duty equipment

Modular training programs

These have recently been introduced for training miners. Modular training is a performance-based training system delivered in incremental steps, with accreditation provided at every interval. This is in contrast to apprenticeship, which provides accreditation only at completion of the full program. The system can retrain workers or provide entry to newly-recruited workers.

Ontario has take the lead in developing the modular training system, although variations can now be found across the country. In Ontario for example, there is a province-wide program in underground hardrock mining that consists of 10 common core modules and 37 speciality skills modules. Local company-specific programs are also offered. Information on modular training programs in Ontario is available from local offices of the College Affairs Branch, Ministry of Colleges and Universities.

Universities

Universities (see list on pages 113-117) offer special courses and degree programs in subjects of interest to individuals interested in becoming involved in the mineral industry, either in mineral sciences and engineering or in entrepreneurial and administrative areas.

In addition, correspondence courses are offered by many universities in a wide range of subjects that would be useful to individuals in remote areas wishing to upgrade employment or management skills, in areas such as bookkeeping, accounting, taxation, law, etc. Single courses and full degree programs are available. The leading universities in the correspondence field in North America are:

University of Waterloo
Waterloo, Ontario N2L 3G1
510-885-1211

and

Athabaska University
P.O. Box 10,000
Athabaska, Alberta TOG 2RO
403-675-6111

Phone or write for free course catalogues and application forms.

OTHER TRAINING

General

In addition to their formal courses, many universities and community colleges offer extension courses and short courses, seminars, and occasional lectures on mining-related topics, either on a regular basis or on demand. Continuing education programs at local high schools and resource centres also provide training in administrative, management, and technically oriented skills. Enquire at local Department of Education and at schools and colleges.

Business

Business Schools

In addition to business courses available at public educational institutions, many private business schools and courses exist. Find them in the Yellow Pages of the telephone directory, and check with Department of Education or Canada Employment Centres about the qualifications of private schools.

Federal Business Development Bank

The FBDB has offices in cities and towns throughout Canada, and offers a number of seminars and instruction packages as well as counselling services for small and medium businesses. For a list of such services, see page 79. For addresses, see pages 97-98.

Indian Management Training Institutes

A number of such institutions have been established or supported as part of DIAND's Indian management and training program, including the Indian Training and Research Institute in Vancouver and the Native Training Institute in Merritt, B.C.

PROSPECTING COURSES

British Columbia

The B.C. and Yukon Chamber of Mines offers a lecture course in prospecting each year in Vancouver. The course is spread over 2 evenings per week for 18 weeks and costs $75. Subjects covered include prospecting, elementary geology and map reading, staking and recording claims, ore deposit classifications and identification, geochemistry, mineral economics, legal agreements and taxation. Optional field trips are also included. The Chamber also gives a course in placer mining, including geology, prospecting, mining methods and regulations.

The B.C. Ministry of Energy, Mines and Petroleum Resources and the Ministry of Education offer an annual advanced 17-day course in mining exploration which is given largely in the field, with a minimum of lectures and theory. The course is aimed at experienced prospectors with some knowledge of rock and mineral identification. Cost is $350, including room and board, and the course is open only to residents of British Columbia who hold a valid B.C. free miner certificate.

The B.C. Ministry of Energy, Mines and Petroleum Resources also offers more basic prospecting instruction from time to time, in various parts of the province, through the Provincial Geologists' regional offices. These introductory courses can be taught at community colleges or in adult education programs, and usually consist of 15 sessions, one night per week.

Alberta

Basic courses in prospecting are offered by the University of Alberta (Extension Courses). Information may be obtained directly from Faculty of Extension, The University of Alberta, Corbett Hall, 82 Avenue and 112 Street, Edmonton, Alberta T6G 2G4.

Saskatchewan

The Department of Energy and Mines offers a six-week course in prospecting, mainly for northern residents of Saskatchewan, in conjunction with the LaRonge Community College. The course includes an introduction to geology and practical prospecting. For details contact the LaRonge Region Community College, P.O. Box 509, LaRonge, S0J 1L0 (306)425-2480.

Manitoba

A course in geology, comprising 11 weekly lectures, was held at the University of Winnipeg in the fall and winter of 1984/85. The cost was $95. Enquire directly from the university for dates of future programs.

Québec

A chaque été, le ministère de l'Energie et des Resources du Québec engage plusieurs étudiants et étudiantes universitaires en géologie et en génie géologique. Ces étudiants et étudiantes assistent des géologues et des ingénieurs géologues au cours de travaux de terrain. Les chefs d'équipe chargés de missions d'exploration géologique sont responsables de l'entrainement des étudiants et des étudiantes en vue de les initier aux travaux d'exploration et de parfaire leur expérience pratique.

Ontario

The Ontario Ministry of Natural Resources (OMNR) offers a basic course on geology which lasts for 6 evenings, over 1 week in late February. The 1985 course may be the last to be offered. The course is aimed mainly at rockhounds and general interest participants.

The OMNR course in Toronto is followed the next week by a one-week course presented jointly by the Prospectors and Developers Association, the University of Toronto, and the Ontario Geological Survey. The PDA course consists of a series of evening lectures based on specific commodities.

Ontario Ministry geologists also present occasional prospecting and related courses from their regional offices, usually in conjunction with a local community college. In the past, some such courses have been presented specifically for native people.

New Brunswick

The Department of Natural Resources provides courses covering an introduction to geology and practical prospecting in the major centres of the province each year, in both French and English. In 1984 courses were presented in St. John, Fredericton, and Moncton. More advanced courses are planned for the future.

Nova Scotia

A prospecting course is offered annually, under the joint auspices of the Nova Scotia Department of Mines and Energy, the Chamber of Mineral Resources and Dalhousie University. In addition to basic prospecting, the course introduces various regulations to the student.

Newfoundland

Newfoundland has no formal prospecting courses or informing training as yet. However, there are two 2-year programs in place in technology fields. 'Mineral Technology' is a 2-year program at Bay St. George Community College in Stephenville, Newfoundland; 'Resource Technician Training Program' is a 2-year multidiscipline program at Labrador Institute of Northern Studies, Northwest River, Labrador (Memorial University Extension). This is geared to Labrador residents.

Yukon

The Yukon Chamber of Mines provides an annual course in mineral identification, geology and prospecting in Whitehorse. The course is aimed both at introducing beginners to prospecting and at upgrading the skills of prospectors with some field experience.

Geological staff from DIAND's regional Northern Affairs office in Whitehorse also offer one-week prospecting courses from time to time in outlying communities.

Northwest Territories

The NWT Chamber of Mines offers a course covering an introduction to geology, prospecting, and practical prospecting in Yellowknife.

The DIAND Northern Affairs office offers short courses in mineral identification for beginners in outlying communities, on request of 10 or more people.

On Reserve - All of Canada South of 60°

The staff of Indian Minerals East and West (DIAND) occasionally offer introductory courses on reserve, at the request of the band, covering such topics as mineral identification, practical prospecting, mineral legislation and taxation.

All Canada - Prospecting Training in the Field

A very effective means of acquiring a practical knowledge of prospecting skills and techniques is working as an assistant to an experienced prospector in the field over one or several seasons. Names of prospectors working in specific locations can be obtained from district mining recorders' offices. Summer employment in exploration activities is also often available for unskilled workers, usually students, with provincial and federal geological survey parties and with company exploration field parties.

5. ORGANIZATIONS AND INDIVIDUALS THAT CAN HELP

Many organizations and individuals will be willing to offer advice, information and other sorts of assistance to native people who wish to learn about or take advantage of mineral industry opportunities.

Some will help on a voluntary basis, at no charge. This includes government departments in all jurisdictions, to the limit allowed them by their responsibilities and knowledge. In the case of company assistance, it may be offered on a voluntary basis as well, but only as a good-will or public relations gesture and only within the limits permitted by the company's financial resources and management style.

The listings below begin with governments, which are required to offer advice and help, then turns to companies, unions, and universities, which may be of assistance and may or may not charge for it. It concludes by mentioning consultants, who are in the business of providing such advice for a fee.

GOVERNMENTS

In all jurisdictions in Canada, ie. Canada, the provinces and the territories, there is a broad range of government departments and agencies which can be of assistance to native people interested in participating in mineral-related activities.

For on-reserve activities in most provinces, the first source of government information would be the nearest regional office of the Department of Indian Affairs and Northern Development, (DIAND) or the appropriate Indian Minerals Office. The DIAND regional and district offices can also provide information on a broad range of government programs of training, assistance, or other matters, which have particular relevance to native people.

For off-reserve activities, enquiries relating to geological information or mineral information in general can be directed to the federal department of Energy Mines and Resources Canada, but in most cases the most direct sources will be found within appropriate provincial government departments.

Government departments are very large and constantly changing, so great patience and persistance may be needed at times to track down the best sources of information.

Federal Departments

Department of Indian Affairs and Northern Development (DIAND)

10 Wellington Street, Hull, Québec
Canada K1A 0H4

Indian and Inuit Affairs Program, and its branches:
- Housing and Band Support Branch
- Education and Social Development Branch
- Resource Economic and Employment Development Branch
- Program Planning and Policy Coordination Branch
- Reserves and Trust Branch

The Indian Minerals Directorate (deals mainly with on-reserve matters in all provinces and territories; is part of the Reserves and Trust Branch)

Indian Minerals (East)
10 Wellington Street
Hull, Québec K1A 0H4

Indian Minerals (West)
P.O. Box 2924 Station M
220 - 4th Avenue S.E.
Calgary, Alberta T2P 2M7

Northern Affairs Program (deals only with the Yukon and Northwest Territories) and its branches
- Northern Policy and Coordination Branch
- Northern Environment Branch
- Northern Resources and Economic Planning Branch, including
  - Mining Management and Infrastructure, and
  - Northern Oil and Gas Management and
  - Major Projects Directorate

Offices located at DIAND headquarters in Ottawa, and in the regional offices in Whitehorse and Yellowknife.

DIAND (continued)

DIAND regional offices are located as follows

Atlantic Region:
Havelock Street, P.O. Box 160
Amherst, Nova Scotia, B4H 3Z3
with District Offices in Fredericton, New Brunswick and Halifax.

Québec Region:
320 East St. Joseph, P.O. Box 3725
St. Roch G1K 7Y2 with a District Office in Sept-Iles, and service centres in Val D'Or and Montréal.

Ontario Region:
25 St. Clair Avenue East
Toronto, Ontario M4T 1M2
and District Offices in Sudbury, Ohsweken, London, Peterborough, Southampton, Brantford, Fort Frances, Moose Factory, Kenora, Geraldton, Thunder Bay, and Sioux Lookout.

Manitoba Region:
275 Portage Avenue
Winnipeg, Manitoba R3B 3A3
and a District Office in Thompson.

Saskatchewan Region:
2221 Cornwall Street
Regina, Saskatchewan S4P 2L1
and District Offices in North Battleford, Prince Albert, Yorkton, Saskatoon, Fort Qu'Appelle, Meadow Lake and Shellbrook.

Alberta Region:
9942 - 108th Street
Edmonton, Alberta T5K 2J5
and District Offices in Calgary, St. Paul, Fort McMurray, and High Level.

British Columbia Region:
800 Burrard Street, Suite 1000
P.O. Box 1000
Vancouver, B.C.
and District Offices in Hazelton, Nanaimo, Fort St. John, Campbell River, Prince Rupert, Prince George, Terrace, and Williams Lake.

Yukon Region:
Northern Affairs
200 Range Road
Whitehorse, Yukon Y1A 3V1
and
Indian and Inuit Affairs
Federal Bldg. (Indian & Inuit Affairs) P.O. Box 4100
Whitehorse, Yukon Y1A 3S9.

DIAND (continued)

Northwest Territories Region:

Indian and Inuit Affairs
4914 - 50th Street
Bellanca Building
P.O. Box 2760
Yellowknife, NWT X1A 1R6
and
Northern Affairs
P.O. Box 1500
Yellowknife, NWT X1A 2R3

Energy, Mines and Resources Canada

580 Booth Street
Ottawa, Ontario K1A 0E4

Within the department, particular branches and agencies which can provide assistance and information on geological and mining matters include the following.

Geological Survey of Canada
601 Booth Street
Ottawa, Ontario K1A 0E8

Surveys and Mapping Branch
Canada Map Office
615 Booth Street
Ottawa, Ontario K1A 0E9

Mineral Policy Sector
580 Booth Street
Ottawa, Ontario K1A 0E4, which includes:
- Mineral Development Branch
- Mineral Supply Branch (commodity information)
- National Mineral Inventory Division (mineral deposit information)
- Human Resources Division (general mining employment information - not specific information on jobs available)

Department of Employment and Immigration

Ottawa, Ontario K1A 0J9, including:

Employment Development Branch
Manpower Planning Directorate (Mining, Transportation, and Communications)

Federal Business Development Bank

The Federal Business Development Bank (FBDB) is a Crown corporation that exists to promote and assist most types of businesses in Canada either at the startup stage or at some other stage in their development. It pays particular attention to the needs of small and medium-sized businesses. FBDB offers three principal services to Canada's business community: financial services (loans, loan guarantees, and financial planning), investment banking, and management services such as counselling, training, and information. (see page 79)

To locate the closest FBDB branch consult the telephone directory or contact one of the regional offices listed below:

Atlantic Regional Office:
Federal Business Development Bank
Suite 1400, Cogswell Tower
Scotia Square
Halifax, N.S. B3J 3K1
(902) 426-7860

Ontario Regional Office:
Federal Business Development Bank
250 University Avenue
Toronto, Ontario M5H 3E5
(416) 593-1144

British Columbia and Yukon
Regional Office:
Federal Business Development Bank
900 West Hastings Street
Vancouver, B.C. V6C 1E7
(604) 687-1300

Quebec Regional Office:
Federal Business Development
Bank
800 Victoria Square
Montreal, Quebec H4Z 1C8
(514) 283-3657

Prairie and Northern Regional
Office:
Federal Business Development
Bank
161 Portage Avenue
Winnipeg, Manitoba R3B 0Y4
(204) 943-8581

or one of the CASE (Counselling Assistance to Small Enterprises) offices:

Atlantic Region:
Corner Brook (709) 639-9126
St. John's (709) 772-5515
Fredericton (506) 452-3022
Moncton (506) 388-6000
Halifax (902) 426-2474
Sydney (902) 539-6910
Charlottetown (902) 566-7460

Ontario Region:
Hamilton (416) 523-2954
Kitchener-Waterloo (519) 744-4186
London (519) 432-6705
Mississauga (416) 273-9880
North Bay (705) 476-4123
Oshawa (416) 571-1355
Thunder Bay (807) 623-2745

Québec Region:
Chicoutimi (418) 545-1580
Laval (514) 681-9291
Longueuil (514) 670-9550
Montréal (514) 878-9571
Québec (418) 694-3672
Rimouski (418) 722-3315
St. Laurent (514) 334-6560
Sherbrooke (819) 565-4740
Trois-Rivières (819) 375-1621

British Columbia & Yukon Region:
Cranbrook (604) 426-7241
Kamloops (604) 374-2121
Kelowna (604) 762-2035
Langley (604) 533-1221
Nanaimo (604) 753-2471
New Westminister (604) 525-1011
North Vancouver (604) 980-6571

Ontario (continued):
Toronto (416) 598-0341
Toronto-North (416) 638-1340
Windsor (519) 254-8626

Prairie & Northern Region:
Regina (306) 359-6478
Saskatoon (306) 665-4822
Brandon (204) 727-8415
Winnipeg (204) 949-6166
Calgary (403) 230-5930
Edmonton (403) 428-9264

B.C. and Yukon (continued):
Prince George (604) 563-0641
Richmond (604) 273-8611
Vancouver (604) 681-7484
Victoria (604) 388-0161

Federal Telephone Referral Service (TRS)

Telephone information on federal government programs and services is available by dialing the toll-free telephone referral service in each province. Zenith numbers listed below can be reached by dialing the operator and asking for the appropriate Zenith number. The TRS client service officers answer general questions, but refer more complex inquiries to the appropriate authority in government.

British Columbia	112-800-663-1381	Canada Service Bureau TRS
	Zenith 08918	in Northern British Columbia
	666-5555	Vancouver (local calls)
Alberta	1-800-282-9481	Canada Service Bureau TRS
	420-2021	Edmonton (local calls)
	420-4161	Telecommunications Device for the Deaf (TDD)
Saskatchewan	Zenith 28000	Canada Service Bureau TRS
	359-6683	Regina (local calls)
Manitoba	1-800-282-8060	Citizens' Inquiry Service
	944-3744	Winnipeg (local calls)
	944-4796	Telecommunications Device for the Deaf (TDD)
Ontario	1-800-268-7207	Canada Service Bureau TRS (Toronto) serving area codes 416, 519 and parts of area code 613 not covered in the Ottawa telephone directory
	926-1993	Toronto (local calls)
		Telephone Referral Service (Ottawa-Hull)
	1-800-267-0330	from Almonte, Carleton Place
	1-800-267-0340	from Kazabazua, Lowe, Perkina, Quyon, Saint-Pierre-de-Wakefield

	995-7151	Ottawa/Hull and areas listed in the Ottawa-Hull telephone directory
	1-800-461-1664	TRS (North Bay) serving area codes 807 and 705
	476-4910	North Bay (local calls)
Québec	1-800-361-7287	Canada Service Bureau TRS
	283-3333	Montréal (local calls)
	694-7738	Québec (local calls)
New Brunswick	1-800-442-4400	New Brunswick Inquiries
	453-2525	Fredericton (local calls)
Nova Scotia	1-426-8092	Canada Service Bureau TRS
	426-8092	Halifax (local calls)
Newfoundland	Zenith 07027	Canada Service Bureau TRS
	772-4365	St. John's (local calls)
Prince Edward Island	1-566-7575	Island Inquiries
	566-7575	Charlottetown (local calls)
Yukon	Zenith 3003	Yukon Inquiries
	667-5811	Whitehorse (local calls)

Provincial and Territorial Mines Departments

The primary source of information in the provinces and territories regarding off-reserve mining activities, opportunities, and regulation will be the provincial mines departments, and their regional offices and resident geologists (and mining recorders, listed separately on pages 103-106 below).

Most government mines departments will supply lists of programs and services for the mineral industry, with names, addresses and phone numbers of contact people.

British Columbia

Ministry of Energy, Mines and Petroleum Resources
Mineral Resources Division
617 Government Street
Victoria, British Columbia V8V 1X4
(604) 387-6242

Inspection and Engineering Branch
Geological Branch
Applied Geology and Prospector's Assistance

District Geologists - regional offices in Fernie, Fort St. John, Kamloops, Nelson, Prince George, Smithers, and Victoria
Titles Branch - regional offices for Alberni, Atlin, Cariboo, Clinton, Fort Steele, Golden, Greenwood, Kamloops, Liard, Lillovet, Nanaimo, Nelson, New Westminster, Nicola, Omineca, Osoyoos, Revelstoke, Similkameen, Skeena, Slocan, Trail CreekVancouver, and Victoria
Mineral Claims Inspectcrs - Vancouver, Kamloops, Nelson, and Smithers

Alberta

Department of Energy and Natural Resources
Mineral Resources Division
9915 - 108th Street
Edmonton, Alberta T5K 2C9
(403) 427-2739

Surveys and Mapping
Exploration Branch
10009 108 Street
Edmonton, Alberta T5J 3C5
(403) 427-6602

Mineral Agreements Branch (403) 427-8167
Mineral Rights Disposition (403) 427-8167
Mineral Rights Compensation (403) 427-8167
Metallic and Industrial Minerals Inventory (403) 427-7222
Land Use Planning (403) 427-7413

Saskatchewan

Department of Energy and Mines
Toronto Dominion Bank Building
1914 Hamilton Street
Regina, Saskatchewan S4P 4V4
(306) 787-2526

District geologists in La Ronge and Creighton.

Manitoba

Department of Energy and Mines
Mineral Resources Division
555 - 330 Graham Avenue
Winnipeg, Manitoba R3C 4E3
(204) 945-6580

Regional offices: see telephone directory Blue Pages.

Ontario

Ministry of Natural Resources
Mineral Resources Group
Whitney Block, 99 Wellesley Street
Toronto, Ontario M7A 1W3
(416) 965-4271

Public Information Centre (Minerals) (416) 965-1348
Ontario Mineral Exploration Program Office (416) 965-1062

Regional Mineral Resources Coordinators' Offices in Kenora, Thunder Bay, Timmins, Sudbury, Huntsville, Kemptville, Richmond Hill, and London.

Regional/Resident Geologists' offices in Kenora, Red Lake, Sioux Lookout, Thunder Bay, Timmins, Kirkland Lake, Sudbury, Sault Ste. Marie, Cobalt, Huntsville, Bancroft, Tweed, Richmond Hill, and London.

Québec

Ministère de l'Energie et des Ressources, Mines
200, chemin Ste-Foy, Québec G1R 4X7
(418) 658-5400

Direction Générale des Recherches Géologiques et Minérales;
Centre de Recherches Minérales;
Direction de Recherches Minérales;
Direction Générale de l'Exploitation et du Développement Minier.

Regional offices in: Rouyn-Noranda, Val-d'Or, Chibougamau, Sept-Iles, and Sainte-Anne-des-Monts, and in Montreal as of Sept. 1985.

For the James Bay Region, information for native people is also available from the Cree Regional Authority and from Makavik Corporation.

New Brunswick

Department of Natural Resources
Mineral Resources Division
P.O. Box 6000
Fredericton, New Brunswick E3B 5H1
(506) 453-2206

Regional offices in Sussex and Bathurst.

Nova Scotia

Department of Mines and Energy
Mines and Minerals Branch
1690 Hollis Street, P.O. Box 1087
Halifax, Nova Scotia B3J 2X1
(902) 424-6657

Mineral Rights (same address).
Regional office in Stellarton.

Newfoundland

Department of Mines and Energy
Lands and Mines Division
P.O. Box 4750
St. John's, Newfoundland A1C 5T7
(709) 737-3159

Regional offices in Goose Bay, Labrador; Labrador City/Wabush; and Pasadena, Newfoundland.

Northwest Territories

Department of Indian Affairs and Northern Development
Northern Affairs Program
  Non-Renewable Resources
  Minerals and Economic Development
  Geology
  Mining Recorder
  Mining Inspection
P.O. Box 1500
Yellowknife, NWT X1A 2R3
(403) 920-8117

Energy, Mines and Resources Secretariat
Government of the Northwest Territories
Yellowknife, NWT X1A 2L9
(403) 873-7224

Yukon

Department of Indian Affairs and Northern Development
Northern Affairs Program
  Mineral Resources
  Mineral Rights
  Regional Mining Engineer
  Exploration and Geological Services
  Mining Recorder
200 Range Road
Whitehorse, Yukon Territory
(403) 668-5151

Department of Tourism and Economic Development
Government of the Yukon Territory
Box 2703
Whitehorse, Yukon Territory Y1A 2C6
  Economic Research and Planning Branch (403) 667-5461
  Energy and Mines (403) 667-5462

Provincial and Territorial Mining Recorders' Offices

For information on the current status of mineral lands, claims, leases, etc. and for recording of claims that have been staked.

British Columbia (Titles Branch - Gold Commission)

Vancouver:
800 Hornby Street
Vancouver, B.C. V6Z 2C5
668-2672

Alberni:
4515 Elizabeth Street
Port Alberni, B.C. V9Y 6L5
723-3501

Clinton:
Box 70
Clinton, B.C. VOK 1KO
459-2268

Golden:
Box 39
Golden, B.C. VOA 1HO
344-5221

Kamloops:
Court House
Kamloops, B.C. V2C 1E5
372-5233

Lilloet:
Box 70
Lillooet, B.C. VOK 1VO
256-7548

Nelson:
310 Ward Street
Nelson, B.C. V1L 5R4
352-2211

Nicola:
Box 339
Merritt, B.C. VOK 2BO
378-6141

Osoyoos:
Courthouse
Penticton, B.C. V2A 5A5
493-1719

Similkameen:
Box 9
Princeton, B.C. VOX 1WO
295-6957

Atlin:
Box 100
Atlin, B.C. VOW 1A0
651-7577

Cariboo:
102 - 350 Barlow Avenue
Quesnel, B.C. V2J 2C1
992-5591

Fort Steele:
102 - 11th Avenue South
Cranbrook, B.C. V1C 2P2
489-3521

Greenwood:
Box 850
Grand Forks, B.C. VOH 1H0
442-8642

Liard:
411, Douglas Building
Parliament Buildings
Victoria, B.C. V8V 1X4
387-4417

Nanaimo:
Courthouse
Nanaimo, B.C. V9R 5J1
754-2111

New Westminister:
100 - 635 Columbia Street
New Westminister, B.C. V3M 1A7
525-0375

Omineca:
Box 340
Smithers, B.C. VOJ 2NO
847-4411

Revelstoke:
Box 380
Revelstoke, B.C. VOE 2SO
837-3222

Skeena:
Courthouse
Prince Rupert, B.C. V8J 1B7
7755-2210

British Columbia (continued)

Slocan:
Box 580
Kaslo, B.C. VOG 1MO
353-2219

Vernon:
Courthouse
Vernon, B.C. V1T 4W5
545-2387

Trail Creek:
Box 910
Rossland, B.C. VOG 1YO
362-7324

Victoria:
412 - Douglas Building
Victoria, B.C. V8V 1X4
387-4417

Ontario

Red Lake Division
P.O. Box 324
Ontario Government Building
Red Lake, Ontario P0V 2M0
(807) 727-2250

Patricia Division
P.O. Box 669, Court House
Sioux Lookout, P0V 2T0
(807) 737-2100

Sault Ste Marie Division
P.O. Box 669, 75 Elgin Street
Sault Ste Marie, P6A 5N2
(705) 254-6884

Sudbury Division
199 Larch Street, 10th Floor
Sudbury, P3E 1G1
(705) 675-4125

Eastern Ontario Division
Whitney Block - Room 2548
Queen's Park
Toronto, M7A 1W3
(416) 965-1322

Kenora Division
808 Robertson Street
Kenora, Ontario P9N 3X9
(807) 468-9841

Thunder Bay Division
435 James Street South
P.O. Box 5000
Thunder Bay, P7C 5G6
(807) 475-1311

Porcupine Division
60 Wilson Avenue
Timmins, P4N 2S7
(705) 267-1401

Larder Lake Division
P.O.Box 984
4 Government Road East
Kirkland Lake, P2N 1A2
(705) 567-1322

Alberta

Mineral Rights Disposition
Dept. of Energy and Natural Resources
9915-108 Street
Edmonton, Alberta T6H 5R7
(403) 427-8167

Saskatchewan

Regina:
Mining Lands Section
Mines Branch
Saskatchewan Energy and Mines
1914 Hamilton Street
Regina, Saskatchewan S4P 4V4

La Ronge:
Mining Recorder
Mines Branch
P.O. Box 5000
La Ronge, Sask. S0J 1L0

Manitoba

Mining Recorder
555 - 330 Graham Avenue
Winnipeg, Manitoba R3C 4E3
(204) 945-6532

Québec

Ville de Québec:
1620, Boul. de l'Entente
Bureau 2B.08
Québec, (Québec) G1S 4N6
(418) 643-1848

Chibougamau:
375, 3e Rue
Chibougamau, G8P 1N4
(418) 478-2663

Sept-Iles:
456, Arnaud, bureau 207
Sept-Iles, (Québec) G4R 3B1
(418) 962-5525

Rouyn-Noranda:
1, 9e rue, Pavillon Laramée
Noranda, (Québec) J9X 2B1
(819) 762-1748

Sainte-Anne-des-Monts:
10 Boul. Ste-Anne ouest
C.P. 697
Sainte-Anne-des Monts (Québec)
G0E 2G0
(418) 763-3622

Val-d'Or - Amos
874, 3e Avenue
Val-d'Or (Québec)
J9P 1T1
(819) 824-6878

New Brunswick

Chief Mining Recorder
Mineral Lands Section
Department of Natural Resources
P.O. Box 6000
Fredericton, N.B. E3B 5H1
(506) 453-2206

Sussex:
Picadilly Road
P.O. Box 1519
Sussex, N.B. E0E 1P0
(506) 433-4317

Bathurst:
495 Riverside Drive
P.O. Box 50
Bathurst N.B. E2A 3Z1
(506) 546-6606

Nova Scotia

Registrar of Mining Claims
Nova Scotia Department of Mines and Energy
P.O. Box 1087
Halifax, Nova Scotia B3J 2X1

Newfoundland

Mineral Lands and Mines Division
Department of Mines and Energy
P.O. Box 4750
St. John's, Newfoundland
(709) 737-2773
claims recording

Yukon Territory

Regional Manager of Mineral Rights
Northern Affairs Program, DIAND
200 Range Road
Whitehorse, Yukon Y1A 3V1
(403) 668-5151 Ext. 308 and 309

Northwest Territories

Mining Recorder
Northern Affairs Program, DIAND
Box 1500
Yellowknife, NWT X1A 2R3

Other Provincial Departments

Other provincial departments will be able to provide information on matters such as employment and training programs, apprenticeship requirements, company formation, environmental regulations etc. The regional offices of the provincial mines departments, DIAND, and Canada Employment will be able to provide advice on such information sources. The Corpus Almanac (see page 70) is also a good source of information on government departments, as are government telephone directories and local telephone directory Blue Pages.

INDUSTRY

Mining Companies

Any advice or help from companies or from individuals in mining companies will generally be given on a voluntary basis. The extent of help offered will vary from none at all to extensive, depending on a number of factors including: the approach taken by the person requesting assistance or advice; the financial condition of the company; the confidentiality of the information requested; and the pressures of business on the individual approached, and, not least in importance, his personality. If a request appears reasonable, but is turned down on the first try, or the second, keep trying unless you are specifically asked to stop; the right combination of circumstances may eventually bring the desired help.

Names of mining companies, addresses, and lists of officers can be found in the Canadian Mines Handbook (page 57). Care should be taken to address questions to the correct division of a company. For example, questions about exploration activities should go to the exploration department, preferably to the person in the field who is in charge of the particular program of interest. Questions about employment opportunities should be directed to personnel staff, preferably on-site or at least at the hiring location. Questions about service contracts should go to the manager of the project in question, or to his purchasing officer. Questions on assays or evaluations of claims should be directed to geologists in the exploration department. And so on.

Industry Organizations

Business

Canadian Council for Native Business.
The group was set up early in 1985, to provide private sector assistance to native businesses and businessmen. The council will provide guidance and expertise; encourage joint ventures with native entrepreneurs; and encourage native people to become involved in the 'broader business community' in Canada. Chairman is Murray Koffler of Toronto, and vice chairman is Don Moses of Lower Nicola, British Columbia. The council has a grant of $75,000 from the federal Native Economic Development Program, of which Mr. Moses is chairman.

Mining

A number of mining industry organizations, both national and regional, will offer advice and assistance on request. A list of such organizations, and, in some cases, a few details about their areas of specialization, follows.

The Mining Association of Canada
705 - 350 Sparks Street
Ottawa, Ontario K1R 7S8
(613) 233-9391
The national organization of the major mineral-producing companies. Primarily a lobbying group, the MAC has also been active in industry promotion and in job-creation and employment assistance activities.

The Canadian Institute of Mining and Metallurgy
400 - 1130 Sherbrooke St. West
Montréal, P.Q. H3A 2M8
The professional organization for people involved in all aspects of mineral exploration, production, and trade.

The Prospectors and Developers Association (PDA)
Suite 420, 74 Victoria Street
Toronto, Ontario M5C 2A5
(416) 362-1969
Combines professional and lobbying activities for mineral exploration. The PDA also has branches in Sudbury, Porcupine, Cobalt, and Sault Ste. Marie, and regional vice presidents in every province and territory.

B.C. and Yukon Chamber of Mines
840 West Hastings Street
Vancouver, B.C. V6C 1C8
(604) 681-5328
The Chamber of Mines offers courses on prospecting and placer mining, and course notes covering mineralogy, geology, exploration techniques, mining law and other subjects of practical and to the beginning prospector.

The Northwest Territories Chamber of Mines
P.O. Box 2818
Yellowknife, NWT X1A 2R1
(403) 873-5281

Yukon Chamber of Mines (and Klondike Placer Mining Association, and Mine Operators Association)
P.O. Box 4427
Whitehorse, Yukon Y1A 3T5
(403) 667-2090

Chamber of Mines of Eastern British Columbia
215 Hall Street
Nelson, B.C. V1L 5X4
(604) 681-5242

Mining Association of British Columbia
P.O. Box 12540, 480, 1066 W. Hastings Street
Vancouver, B.C. V6E 3X1
(604) 681-4321

Alberta Chamber of Resources
1403 Baker Centre, 10025 106 Street
Edmonton, Alberta T5J 1G4
(403) 420-1030

Saskatchewan Mining Association Inc.
730 Avord Tower
Regina, Saskatchewan S4P 0R7
(306) 527-9505

Mining Association of Manitoba
1730, One Lakeview Sq., 155 Carleton Street
Winnipeg, Manitoba R3C 3H8
(204) 942-2789

Manitoba-Saskatchewan Prospectors and Developers Association
P.O. Box 577
Flin Flon, Manitoba R8A 1N4
(204) 687-3411

Northwestern Ontario Prospectors Association
c/o David Galley
Nesbitt Thomson Bongard Inc.
204 Red River Rd.
Thunder Bay, Ontario P7B 1A4
(807) 344-6618

Ontario Mining Association
10th Floor, 199 Bay Street
Toronto, Ontario M5J 1L4
(416) 364-9301

Québec Asbestos Mining Association
1130 Sherbrooke W., Ste 410
Montréal, Québec H3A 2M8
(418) 529-8168

Québec Metal Mining Association Inc.
704, 2 Place Québec
Québec, Québec G1R 2B5
(418) 525-4706

Association des Prospecteurs du Québec (APQ)
1327, avenue Maguire
Sillery, Québec G1T 1Z2
(418) 683-7623

Association des Géologues du Québec (AGQ)
Case postale 470
Succursale Tour de la Bourse
Montréal, Québec H4Z 1J2

New Brunswick Prospectors and Developers Association
c/o T.G. Mereseau
Northeast Exploration Services Ltd.
875 St. Peter Avenue
Bathurst, N.B. E2A 2A1
(506) 548-2592

Chamber of Mineral Resources of Nova Scotia
P.O. Box 38, Station 'M'
Halifax, Nova Scotia B3J 2L4
(902) 798-2218

Newfoundland and Labrador Explorationists (NALE)
c/o Newfoundland Dept. of Mines and Energy
Publications and Information Section
St. John's, Newfoundland
(709) 737-3159

UNIONS

Unions may be useful sources of information for individuals wishing to seek employment in mine development activities or in mining operations. These two types of activity must be considered separately.

In the development, or construction, phase of mine development, if the contractor doing the construction uses union labour, it is necessary to join the union before being hired. Membership is not automatic and hiring will usually be done at a hiring hall designated by the union, and not necessarily at the mine location.

In the production phase, where the mining company or operating company does its own hiring directly, and if the employees are unionized, union membership will be available automatically to everyone who is hired by the company, after they are hired. Hiring can be done at a variety of locations, including at the mine site and at local or distant Canada Manpower centres.

Unions in the Construction Sector

There are many unions in the construction sector which are involved in mine development activities. As noted above, individuals must join these unions before being hired by contractors. Among the major ones are:

- The United Brotherhood of Carpenters and Joiners
- International Brotherhood of Electrical Workers
- International Union of Operating Engineers
- Labourers International Union of North America
- International Association of Sheet Metal Workers and Roofers
- United Association of Plumbers and Pipefitters
- Bricklayers Masons and Plasterers International Union
- International Brotherhood of Painters

All except the Labourers and the Carpenters and Joiners are affiliated with the Trades and Labour Congress of Canada, and all are associated with the US-based AFL-CIO and its building trades department.

Unions in the Mining Sector

There are 33 different unions representing workers in the mining sector in Canada. Among the major unions in the mining sectors are the following:

United Steel Workers of America (USWA)
USWA is by far the largest union involved in mining. In addition to representing mining workers in most regions, the USWA also represents service workers in most regions. The USWA is an affiliate of the Canadian Labour Congress (CLC) and the US-based AFL-CIO.

Canadian Association of Industrial, Mechanical, and Allied Workers (CAIMAW)
This union is based primarily in British Columbia. CAIMAW is an affiliate of the Canadian Council of Unions. (CCU).

Canadian Association of Smelter and Allied Workers (CASAW)
This union, like CAIMAW, broke away from USWA. It represents workers at Alcan's Kitimat Smelter and at Giant Yellowknife Mines. It is an affiliate of CCU.

The Confederation of National Trade Unions (CNTU)
This union represents miners in northwestern Québec and some workers in the Asbestos area of Québec.

United Mine Workers of America (UMWA)
This union represents coal miners, mainly in Nova Scotia and British Columbia. It is affiliated with CLC.

Energy and Chemical Workers Union (ECW)
The ECW represents about half the potash mineworkers in Saskatchewan and workers at Sherrit Gordon's refinery in Alberta. It is affiliated with the CLC.

International Union of Operating Engineers (IUOE)
This union organized the workers at the new coal developments in northeast British Columbia (but no longer represents Quintette workers, who now belong to the USWA), and at Detour Lake gold mine in Ontario. The IUOE is an affiliate of the Canadian Federation of Labour (CFL).

ACADEMICS - UNIVERSITIES

Academics at universities may also be willing to provide assistance and advice in their areas of expertise, on a voluntary good-will basis. Where considerable time or personal expense is involved, academics will generally wish to be reimbursed. There are also academics who will provide advice and assistance on a fully commercial basis, charging much the same rates as consultants.

Various departments may be approached in a search for help. Geology department faculty members can provide, for example, assistance in map reading, prospecting and geoscience methods, interpretation of results, contacts in the mining industry, framing terms of reference for professional consultants, and other related areas. Mining departments are also useful sources of technical information. Schools of business can provide assistance in company formation, management practices, contracts and agreements etc. In fact, a number of Schools of Business offer programs of assistance to small businesses which may be useful to native entrepreneurs in areas such as setting up an office or a payroll or bookkeeping and records systems, feasibility studies, office management, dealing with government regulations etc. Faculties of law may also be useful for contract and agreement advice, and assistance in identifying and interpreting relevant legislation and regulations.

A list of universities in each province which have departments of geology or mining, and possibly schools of business and of law as well is given below.

British Columbia

Vancouver

The University of British Columbia
Department of Geological Sciences; Department of Mining and Mineral Process; Faculty of Commerce and Business Administration; Faculty of Law

Alberta

Edmonton

University of Alberta
Department of Mineral Engineering, Department of Geology, Faculty of Business Administration and Commerce, Faculty of Law

Calgary

University of Calgary
Department of Geology and Geophysics; Faculty of Law; Faculty of Management

Saskatchewan

Regina

University of Regina
Department of Geology, Faculty of Administration

Saskatchewan
University of Saskatchewan
Department of Geological Sciences; College of Commerce; College of Law

Manitoba

Brandon
Brandon University
Department of Geology

Winnipeg
The University of Manitoba
Department of Earth Sciences; Department of Geological Engineering; Faculty of Administrative Studies; Natural Resources Institute

Ontario

St. Catherine's
Brock University
Department of Geological Sciences; School of Administrative Studies

Ottawa
Carleton University
Department of Geology; School of Commerce

University of Ottawa
Department of Geology; Faculty of Administration; Faculty of Law

Thunder Bay
Lakehead University
Department of Geology

Sudbury
Laurentian University
Department of Geology; School of Commerce and Administration
(with affiliated colleges: Hearst, Algoma and Nipissing)

Hamilton
McMaster University
Department of Geology; Faculty of Business

Kingston
Queen's University
Department of Geological Sciences; Department of Mining Engineering; Faculty of Law; School of Business; Centre for Resource Studies

Toronto

University of Toronto
Department of Geology; Faculty of Law; Faculty of Management Studies

York University
Department of Earth and Environmental Science; Faculty of Administrative Studies; Osgood Hall Law School

London

The University of Western Ontario
Department of Geology; School of Business Administration; Faculty of Law

Waterloo

University of Waterloo
Department of Earth Sciences

Windsor

University of Windsor
Department of Geology; Department of Geological Engineering; Faculty of Business Administration; Faculty of Law

Québec

Montréal

Concordia University
Department of Geology; Faculty of Commerce and Administration

McGill University
Department of Mining and Metallurgical Engineering; Faculty of Law; Faculty of Management; Faculty of Science (Geological Sciences).

Université de Montréal
Dept. de Geologie; Ecole des Hautes Etudes Commerciales; Ecole Polytechnique

Université du Québec à Montréal (UQAM)
Module des Sciences de la terre; Module de Sciences juridiques; Famille des Sciences de la gestion: administration, sciences comptables

Québec City

Université Laval
Faculté de foresterie et géodesie; Faculté des sciences de l'administration; Faculté de droit.

INRS - Géoressources
Institut national de la recherche scientifique
Recherche, encadrement d'étudiants gradués, services, collaborations et coopérations

Chicoutimi

Université du Québec à Chicoutimi (UQAC)
Module des sciences de la terre, Centre d'études sur les Ressources minérales, Module des sciences de l'administration

Rimouski

Université du Québec à Rimouski (UQAR)
Module d'administration

Trois-Rivières

Université du Québec à Trois-Rivières (UQTR)
Module d'administration

Hull

Université du Québec à Hull (UQAH)
Module d'administration

Rouyn

Université du Québec en Abitibi-Témiscamingue
Module des sciences de l'administration

Sherbrooke

Université de Sherbrooke

New Brunswick

Sackville

Mount Allison University
Department of Geology, Department of Commerce

Fredricton

University of New Brunswick
Department of Geology; Faculty of Administration; Faculty of Law

Nova Scotia

Antigonish

St. Francis Xavier
Department of Geology

Wolfville

Acadia University
School of Business Administration
Department of Geology

Halifax

Dalhousie University
Faculty of Administrative Studies; Faculty of Law; Department of Geology.

Technical University of Nova Scotia

Saint Mary's University
Department of Geology

Newfoundland

St John's
Memorial University of Newfoundland (MUN)
Department of Earth Sciences; Faculty of Business Administration;
P.J. Gardiner Institute for Small Business Studies.

Goose Bay
Labrador Institute of Northern Studies (MUN) (Tech. Programs)

Corner Brook
MUN Grenfell Regional College (yrs. 1-2)

CONSULTANTS

What is a Consultant?

A consultant is an individual or company which offers services for a fee. Generally, consultants charge their clients, by the hour or by the day, for the time which they spend actually working for their client. It is also standard for consultants to charge their expenses when they travel from their office to their client's, when they travel on behalf of their client, or have direct costs associated with their work. Examples of these direct costs are long distance telephone, photocopying, postage or courier, and costs for computing.

Who Needs a Consultant? When?

Native people active in mineral development and related business activities might have the need for consultants of many different types. For example, an individual or band might engage the services of a consulting geologist to assess the mineral potential of their region, or the results of a prospecting effort. An individual or group involved in a joint venture with an established mining company might consult with geologists, engineers, accountants and/or lawyers as the business agreement is being developed. It would be the role of any such consultants to advise the native client honestly about the costs and benefits of the proposed business deal and to act in the client's best interests. Consultants may also provide continuing services such as accounting and business management.

Although hiring a consultant can be very useful, and even necessary on occasion, it is important to consider carefully whether consulting help is really necessary in every instance. You may be able to get similar help at little or no cost, for example, from government, from people who teach in business, technology or social science programs in universities or community colleges, or from mining companies. Such individuals may also provide preliminary help in locating appropriate and competent consultants, and in defining the tasks that need to be performed and can be expected within the limits of available funding. Definition of task is a very important stage, one that will help to ensure that the work performed by consultants is useful and not unnecessarily expensive.

Hiring a Consultant

If it is necessary or advisable to hire a consultant, it is generally a good idea to get proposals from a number of individuals or firms for the proposed work. In general, each proposal should indicate the consultant's understanding of the precise tasks to be carried out, how the consultant proposes to do the job, how much it will cost, and the names and skills of the people who will do the work.

When calling for proposals, it is very important to provide the terms of reference, i.e. a very clear statement of the services required. It is fairest for all the consultants if these terms of reference are in writing and are the same for all of the consultants approached. Written terms of reference also help in the supervision of the work of the consultant, to see that he provides the services that are needed.

In looking for consultants, you may talk to other Indian bands or native organiztions about consultants they have used for similar work. In addition, governments and companies often have lists of consultants with various types of experience and skills which might be made available to native people. Professional organizations also have lists of their members. For example, if you wanted financial or accounting assistance, you might contact the Institute of Chartered Accountants, the Society of Management Accountants or the Certified General Accountants Association in your province.

Working With a Consultant

The vast majority of consultants are honest and try to serve their clients well. Most problems between consultants and clients arise because of lack of precision in the terms of reference, or lack of understanding about the purpose of the task. Occasionally, however, a client may have problems with a consultant who does not perform well, or with a consultant who overcharges. In these rare cases, it is possible to seek help from a provincial consumer protection bureau, or, if the consultant is a member of a recognized profession such as law, accounting, engineering or management consulting, from the professional association or the disciplinary body for that profession.

If problems do arise in dealing with a consultant, try to separate those problems which may have occurred because you have not told the consultant your expectations as clearly as you might have, or because you may not like the bad news that the consultant may have to give you, from those which appear to be genuine breaches of professional conduct or the law.

APPENDIX I BOOKS, PAPERS, REPORTS, ETC.

See also pages 57-74, written sources. For more complete coverage of books etc., visit libraries of the Geological Survey of Canada, provincial and territorial mines departments, and universities, as well as public libraries.

Prospecting and Developing

A.H. Lang, *Prospecting in Canada*, Economic Geology Report No. 7, Geological Survey of Canada, 1970, $24.95, 308 pages.

R.J.W. Douglas, *Geology and Economic Minerals of Canada*, 4th Edition, Economic Geology Series, Geological Survey of Canada, $28.00, French or English.

Geological Survey of Canada, *Information for Collectors*, annual update of information sources for rock collectors, including book lists, mineral and rock sets, addresses for maps and reports, gemmology courses, mineral and rock clubs, etc.

Canadian Institute of Mining and Metallurgy, *Prospecting in Areas of Glaciated Terrain*, 1982.

The Geology of Industrial Minerals in Canada, CIM vol. 29.

Geology of Canadian Gold Deposits, CIM vol. 24.

M. Prinz, G. Harlow and J. Peters (eds.), *Simon and Schuster's Guide to Rocks and Minerals* (New York, Simon and Schuster, 1978), 607 pages.

H.G. Clark, *Handbook for Prospectors and Developers in the Kenora Area*, Tri-Municipal Economic Development Commission, Kenora Ontario, 1984, 190 pages.

Garnett Basque, *Gold Panner's Manual*, 1978.

W.G. Gordon Walker, *Mining Exploration Agreements*, CIM vol. 28, (Montreal: Canadian Institute of Mining and Metallurgy).

William C. Peters, *Exploration and Mining Geology*, John Wiley and Sons, 1978.

British Columbia and Yukon Chamber of Mines, *Prospecting and Mining School*, course material for prospecting course offered each year in Vancouver.

Prospectors, Mine Makers, Mining History

Arnold Hoffman, Free Gold: the Story of Canadian Mining, (New York: Associated Book Service, 1958.

D.M. Le Bourdais, Metals and Men: the Story of Canadian Mining (Toronto: McClelland and Stewart, 1957.

John Carrington (ed.) Risk Taking in Canadian Mining (Toronto: Pitt Publishing Company, 1980).

M.R. Hanula (ed.) The Discoverers: a 50-Year History of the Prospectors and Developers Association, Some Famous Prospectors, and their Discoveries (Toronto: Pitt Publishing Co. Ltd., 1982).

W.G. Richardson, A Survey of Canadian Mining History, CIM vol. 14, (Montreal: Canadian Institute of Mining and Metallurgy).

Interpretation of Legislation

W.G. Jeffery, Mining Legislation and Administration in Canada, 1981.

V.M. Johanson, Digest of Canadian Mining Law, 1982.

Ruth Thompson, Aboriginal Title and Mining Legislation in the N.W.T., 1982.

DIAND, The Indian Act: The Indian and the Law: and Interpretation for the Layman, 1976.

DIAND, A Guide to Territorial Land Use Regulations publication no. QS - 8286-020-EE-A1, 1981.

DIAND, Northern Natural Resource Development: Requirement, Procedures and Legislation. Identifies the various authorizations required, describes the procedures and legislation involved in northern natural resource development, in simplified form.

DIAND, Information sheets. Summaries of legislation - examples include:

Mineral Rights Division - lists legislation, summarizes some staking information for placer and quartz mining (May, 1984).

Guidelines - Yukon Placer Mining Act: Advice to Applicants for Lease to Prospect, April, 1981.

Staking Guide - Yukon Quartz Mining Act, December, 1977.

Yukon Quartz Mining Act - Schedule of Representation Work.

Law Society of Upper Canada, Mining Law - From Staking to Production, Continuing Education Department, Osgoode Hall, Toronto, 1985.

Descriptions, interpretations and summaries of provincial legislation affecting exploration and mining is generally available from provincial mines departments. For example:

Ontario Ministry of Natural Resources, A Guide to Legislation Affecting Mining in Ontario, 1984. Also Revised Summary of Assessment Work Requirements and Revised Summary of Staking Requirements. Simplification of these requirements as set out in the Mining Act of Ontario.

Nova Scotia Dept. of Mines and Energy, Information on Staking Claims in Nova Scotia - a simplification of the requirements set out in the Mineral Resources Act.

Manitoba, A Guide to Legislation Affecting Mining in Manitoba, 1984.

Federal Government Mineral Information

Both EMR (Ottawa) and DIAND (Ottawa, Yellowknife, and Whitehorse) have libraries which will be of use to anyone looking for mineral information. In addition, the Geological Survey of Canada, in Ottawa and in its regional offices (pp. 64-65) also has libraries of geological and exploration material. A few sample titles are given below, to supplement the titles given in Part III.

ENERGY, MINES AND RESOURCES (EMR): commodity studies, for example:

- Canadian Iron Ore Industry Statistics, 1982 and 1983.
- Canadian reserves as of Jan. 1, 1980 of Copper, Nickel, Lead, Zinc, Molybdenum, Silver, Gold MR189, 1981.
- A Review of the World and Canadian Lead Industry MRI80/15, 1980.
- Sulphur Market Profile, MRI84/5, 1983.
- Cement in Canada, MR133, 1973.

EMR: mineral industry studies - for example:

- Canadian Mineral Deposits Not Being Mined in 1983 (1,579 deposits described) MR198, 1983.
- Canada's Nonferrous Metals Industry: Nickel and Copper, Special Report, 1984.
- Wages in the Mining Industry, MRI81/8, 1981.
- Canadian Minerals Yearbook- Annual.
- The Canadian Mineral Industry Monthly Report.

EMR, Native Peoples and Mining, Mineral Bulletin, MR171, 1977.

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT (DIAND)

Mines and Minerals Activities - an annual report on mineral exploration, development, and production activities in the Yukon and Northwest Territories.

Environmental Guidelines: Pits and Quarries - sets out recommended procedures for pit and quarry operations. QS 8296-000-BB-A1, 1981.

Land Use Guidelines: Mineral Exploration, Yukon, and Northwest Territories, QS. 8321-000-EE-Aq, 1983.

'An Evaluation of the Social and Economic Impact of Exploration, Development, and Production of the Mineral Resources in the Yukon and Northwest Territories on the Northern and National Resources', prepared by Woods Gordon for DIAND, 1982.

Provincial Mineral Information

INTRODUCTION

Only a brief sampling of the sorts of useful titles will be presented below, since the number of books, papers, reports, files, and other material is very extensive. Basic written sources are listed in Part II. Remember that all provincial/territorial mines departments generally will provide maps, geological reports, commodity reports, drill core files etc. in addition to the selection of titles shown here. Addresses of provincial departments are listed on pages 99-102. Most mines departments and all university departments of geology will also have libraries of information on geology, mineral deposits, exploration methods etc.

GENERAL

Provincial Geologist Journal, Volume 1, 1983. Available from most provincial mines departments, geological survey branches. Includes organization charts, contact people, geological survey activities, and provincial publications lists.

BRITISH COLUMBIA

Catalogue of Publications, Maps and Services

Guide to Placer Staking

Guide to Locating, Recording and Maintaining Mineral Claims

Guidelines for Mineral Exploration

Notes on Placer Mining in British Columbia

An Analysis of Distribution of Mineral Occurrences in British Columbia

ALBERTA

Going for Gold in Alberta: A Guide to Placer Mining and Panning

The Who What Where Why of GEODIAL - information on an Alberta geoscience bibliographic data base

SASKATCHEWAN

Geological Services - a directory of services provided by the province to mineral and petroleum explorationists, including names and phone numbers of contact people

Provincial Mineral Information (continued)

MANITOBA

Mineral Exploration Services in Manitoba - a directory.

A Guide to Legislation Affecting the Mineral Industry of Manitoba, 1984.

Publications Price List, Geological Services Branch and Mines Branch.

ONTARIO

Ontario Mineral Score - an annual book of Ontario mineral statistics, including exploration results, claims staked, assessment work reported, production volumes and values, production costs, etc.

Minefacts - an occasional newsletter containing information on the Ontario industry.

Rocks and Minerals Information - annually updated lists of general and nontechnical reference material on rocks and minerals published by the Ontario and Federal governments. Also lists mining companies and other organizations with information about mining and minerals.

Mineral Commodity Reports - commodity by commodity reports on locations of mineral deposits, including metals and industrials minerals.

A Guide to Legislation Affecting Mining in Ontario, Mineral Policy Background Paper No. 18, August 1984. Includes names and addresses of key provincial and federal contacts involved with the mineral industry, exploration, development, operations, and abandonment.

QUEBEC

Liens entre les compagnies reliées à l'industrie minérale québécoise 1984, Québec, ministère de l'Energie et des Ressources, service de la Statistique, publication no. 845, publication gratuite si demande restreinte, 166 pages.

L'industrie minérale du Québec en 1983, Québec, Ministère de l'Energie et des Ressources, direction des Communications, publication gratuite si demande restreinte, 108 pages.

Production Minérale au Québec - annual.

Programmes d'Aide l'Intention de l'Industrie Minière - a description of Québec government financial assistance programs to encourage mineral exploration in the province.

Provincial Mineral Information (continued)

NOVA SCOTIA

Department of Mines and Energy, Directory of Goods and Services for Exploration Companies.

Keyword Index to GSC documents on Nova Scotia to 1980
Indexes to drill-hole data, assessment reports, publications etc. from Nova Scotia Department of Mines and Energy.

NEW BRUNSWICK

List of Publications Available from Department of Natural Resources, Mineral Resources Division - Information Circular 85-1, 1985, ISSN 0704-3406, 375 pages plus map.

Minerals Strategy Update 1982

Goods and Services Directory, February 1985, serving the mineral industry

NEWFOUNDLAND

Local Mineral Exploration Service Companies, Contractors and Consultants, February 1985 - a directory

YUKON (DIAND)

A Brief History of Placer Mining in the Yukon

Mining and Mineral Activities - annual

Mineral Industry Report 1980-81, published 1984 - updated yearly. Available in Whitehorse from DIAND, Northern Affairs.

NORTHWEST TERRITORIES (DIAND)

Walter Gibbons, 'Mining Development, Mineral Inventory and Metallogenic Model: Arctic Regions, NWT', reprint from Arctic Geology and Geophysics, 1982.

Mining and Mineral Activities - annual.

Mineral Industry Report 1980-81, published 1984, updated yearly. Available in Yellowknife from DIAND, Northern Affairs.

Business Information

GENERAL

Federal Business Development Bank, ABC - Assistance to Business in Canada, 246 pages. Annual handbook of federal government assistance programs, including description, application instructions, names of government contacts with addresses and phone numbers. Ontario programs are included as well.

Federal Business Development Bank "What it is, What it does, What it can offer you". Description of the many services, such as lending, counselling, and management training, available from FBDC.

FBDC - "Branches All Across Canada" - directory of addresses and phone numbers of FBDC branches.

Canada Mortgage and Housing Corporation, How to Hire a Contractor - includes information on bids, contract terms, payments, consumer protection laws, etc.

Employment and Immigration Canada, Government of Canada Job Creation Programs, 1983.

Paul Davies, 'Shehtah Drilling Ltd.', APOA Review, Spring/Summer 1984, Volume 7 No. 1, (Arctic Petroleum Operators Association, Information Service, P.O. Box 1281, Postal Station M, Calgary, Alberta T2P 2L2) First of a series of articles in the APOA Review describing northern business participation projects between native people's corporations and the petroleum industry.

Michael Robinson, Native and Local Economics, A Consideration of Nine Models of Business Development, January 1981, Petro-Canada, Environmental and Social Affairs, available from APOA Review.

Indian Affairs and Northern Development Canada, Mineral Industry Incentive Programs and Services, Northern Mineral Policy Series, 1984. This publication looks at government direct incentive programs for exploration, development, mining and smelting and refining offered by DIAND, other federal departments, and provincial governments in New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and British Columbia.

Business Information (continued)

ON RESERVE

Revenue Canada, Taxation, Interpretation Bulletin No IT-62. August 18, 1972. Subject: Income Tax Act: Indians

Department of Indian Affairs and Northern Development (DIAND) Legal Aspects of Economic Development on Indian Reserve Lands, 1976 - gives a general picture of the legal framework for on-reserve businesses, including: scope of federal jurisdiction federal band member, and band rights on reserve, mineral surrender, permits and leases, provincial laws, forms of business organization, band government powers and band-controlled enterprises etc.

DIAND, Indian and Inuit Affairs Program, Native Opportunities: Course and Program Guide, Canadian Colleges and Universities - includes both open courses and courses directed at or with special consideration given to native students QS 5154-003-EE-AI 1980

DIAND, Community Economic Development in Rural Canada, QS 5159-000-EE-A
Indian Economic Development Fund, QS 5194 000 BB-A2
INAC NEED Initiative (New Employment Expansion and Development)

DIAND, Band Technical Series: practical manuals on, for example:
Construction Contracting Guidelines for Band Councils, 1981, 200 pages
Construction Management, 1981, 55 pages

Guidelines for Construction Inspection by Indian Bands, 1981, 27 pages
DIAND, Technical Services and Contracts Branch, Directory of Services, 1983

Government of Saskatchewan, Indian and Native Economic Development in Saskatchewan, discussion paper, 1985. Looks at economic development experience, possibilities, government programs etc., for native people in Saskatchewan. Development areas considered include major resource development and small business development.

Education Information

DIAND, Native Opportunities: Course and Program Guide, Canadian Colleges and Universities, 1980.

DIAND, Band Training Digest - newsletter with information on training materials and programs, published 3 times a year.

DIAND, Indian Education in Canada - educational facilities and courses available to registered Indians, including post-secondary courses, 1973.

DIAND, Post-Secondary Education Assistance Program - describes program and application procedures for registered Indians, 1980.

Ontario Ministry of Colleges and Universities, Apprenticeship and You

Ontario Ministry of Education, Skills Development Division, Underground Hard Rock Mining, Skills Program No. 770010 - A Guide to registration, reporting and accreditation. One of many mining-related skills programs offered in Ontario.

Ontario Ministry of Colleges and Universities, Programs Catalogue: Ontario Modular Training System.

University of Waterloo, Correspondence Courses 1984-85. Catalogue and application instructions.

APPENDIX II PARTIAL LIST OF NATIVE ENTREPRENEURIAL VENTURES

This list is by no means complete. However, it does give some idea of the wide variety and geographic spread of businesses owned and/or operated by native individuals, bands, corporations, and other groups that are or have been involved in mineral exploration, development, or production.

Peter Nabigon: prospecting, claim staking, line cutting; Thunder Bay, Ontario.

Native Exploration Services (Sam R. Bosum): claim staking, line cutting, Chibougamau, Québec.

West Bank Indian Band, Kelowna, B.C.: part owner of Northland Bank of Calgary, and has its own land development and other corporations.

Sampson Management Ltd.: owned by Samson Band, Hobbema, Alberta. Has on-reserve oil and gas production; part-owner (8 percent) of Bank of Alberta.

Ermineskin Band, Hobbema, Alberta: on-reserve oil and gas production; shareholder in Northland Bank.

Shehtah Drilling Limited: a joint venture of the Denendeh Development Corporation, Metis Development Corporation, and Esso Resources Canada Limited.

Sarcee Band, Calgary, Alberta: has a land development company and other companies.

Red Earth Indian Band, Saskatchewan: owns Red Earth Energy Ltd., a publicly-traded company looking at uranium and helium on-reserve, and a gold prospect in Manitoba.

Sinco Development Limited: owned by 52 of the 69 bands in Saskatchewan. Operates many wholly-owned subsidiary companies, including an industrial security service, a consulting service, a trucking firm, and an exploration company. The company was established in response to suggestions arising during the public hearings on development of uranium resources in northern Saskatchewan. It supplies trucking services to uranium producers.

Nunasi Corporation formerly known as Inuit Development Corporation (IDC), Ottawa: the IDC had employment-supply contracts with Cominco for its Polaris mine, and with the Cullaton Lake gold mine. Nunasi is considering directly operating its own mineral exploration program.

Ghost Lake Resources Limited: a band-owned mineral exploration company operating out of Rae-Edzo, NWT.

Makavik Corporation: the development corporation of the Inuit of the James Bay region. Its subsidiaries include a construction company, an airline (Air Inuit), a travel agency, a maintenance company, and an aircraft leasing firm.

Tulita Developments Ltd., Fort Norman, NWT: band-owned company has contracts with the territorial government and Interprovincial Pipe Line (NW) Ltd. in a variety of service areas including: water delivery, fuel distribution, catering, and camp security.

Mistassini Development Corporation, Québec: line-cutting, staking etc. and other exploration related activities.

Wasbec Mining Incorporated, Chibougamau region, Québec: ground geophysics, staking etc., and other exploration-related activities.

Metis Development Corporation: owned by the Metis of the Northwest Territories; among its interests are an exploration camp and equipment in the Mackenzie Valley acquired from Petro-Canada under a purchase-lease-back agreement. Also owns 25 percent of Shehtah Drilling.

Bosworth Creek Enterprises: owned by the Dene people at Norman Wells, Bosworth has acquired a drilling rig camp under a similar purchase-lease-back arrangement with Petro-Canada.

Appendix III LIST OF AUTHORIZED BOOKSTORE AGENTS FOR THE SALE OF CANADIAN GOVERNMENT PUBLICATIONS

Newfoundland

St. John's

Dicks & Co. Ltd.
320 Water Street
A1C 5K6

Memorial University of Newfoundland
Bookstore
A1C 5S7

Macy's Book Store
17 Rowan Street
A1B 2X2

Nova Scotia

Bedford

Sunnyside Bookstore
Sunnyside Shopping Plaza
B4A 2X1

Dartmouth

Dartmouth's Bookstore
535 Portland Street
B2Y 4D1

Greenwood

Mills Bookstores Limited
Greenwood Shopping Mall
B0P 1N0

Halifax

The Book Room Ltd.
1664-1666 Granville St.
B3J 2N7

Classic Bookshops
Scotia Square
B3J 1N9

Sydney

Macleod's Bookstore Ltd.
361 Charlotte Street
B1P 6H9

Wolfville

The Box of Delights
328 Main Street
B0P 1X0

New Brunswick

Bathurst

Book Village du Livre Ltee
Plaza K-Mart
700, avenue St-Peter
E2A 2Y8

Fredericton

University Bookstore
University of N.B.
E3B 5A3

Westminister Books
445 King Street
E3B 1E5

Moncton

Bookmart Ltd.
Moncton Mall
1310 Mountain Road
E1C 2T6

Sackville

Bookstore
Mount Allison University
E0A 3C0

Saint-John

Heritage Books
50 King Street
E2L 1G4

Westiminister Books
85 King Street
E2L 1G4

Prince Edward Island

Charlottetown

The Bookmark
Confederation Court Mall
C1A 1H9

Québec

Amos

Librairie Querbes
241, 1ere avenue, est
J9T 1H5

Chicoutimi

Librairie Régionale Inc.
461 est, rue Racine
G7H 1T6

Dolbeau

Librairie Centrale Ltée
1245, boul. Walberg
G8L 1H3

Drummondville

Librairie du Centre du Québec Inc.
254, rue Brock
J2C 1M4

Granby

Librairie Jean-Yves Inc.
3, rue Court
J2G 4Y6

Hauterive

Librairie Manicouagan Inc.
836, rue de Puyjalon
G5C 1N1

Hull

Librairie Cartier-Mignault Ltée
157, Promenade du Portage
J8X 2K4

Librairie Cartier-Mignault Ltée
Place du Centre
200, Promenade du Portage
J8X 4B7

Librairie Moderne
400, boul. Taché
J9A 1M0

Joliette

Librairie René Martin Inc.
598, rue St-Viateur
J6E 3B7

Jonquière

Librairie L.I.M.A. Jonquiere Inc.
2501, rue St-Dominique
G7X 6K1

Lennoxville

Bishop's University Bookstore
J1M 1Z7

Montréal

Bonder's Bookstore/Librairie
Bonder Inc.
1188 Bernard Avenue W.
H2V 1V3

Concordia University Bookstore
Loyola Campus
7141 Sherbrooke Street West
H4B 1R6

Concordia University Bookstore
Sir George Williams Campus
1455 De Maisonneuve W.
H3G 1M8

Librairie postale Bibliorama Inc.
7045, ave. du Parc
H3N 1X8

Librairie Caron
251 est, rue Ste-Catherine
H2X 1L5

Conexfor Inc.
(cartes geographiques et materiel
d'accompagnement)
Complexe Desjardins, Suite 137
H5B 1B8

Librairie Demarc Inc.
Succursale Fleury
1691 est. rue Fleury
H2C 1T1

Librairie Demarc Inc.
Succursale Desjardins
Complexe Desjardins
H5B 1B5

Institut de Recherches
Psychologiques Inc.
34 ouest, rue Fleury
H3L 1S9

Librairie juridique
Juritel Inc.
651 ouest, rue Notre-Dame
H3C 1H9

Librairie Leméac Inc.
371 ouest, avenue Laurier
H2V 2K6

La Librairie scientifique Bernard
Henault Enr.
2001, rue Université
Magasin 304
H3A 2A6

Librairie de l'Université de
Montréal
3200, rue Jean Brillant
Local 1315

Librairie Renaud-Bray Enr.
5219, chemin Côte-des-Neiges
H3T 1Y1

Librairie Renouf Ltee/Renouf
Publishing
2182 ouest, rue Ste-Catherine
H3H 1M7

McGill University Book Store
1001 Sherbrooke Street W.
Samuel Bronfman Building
H3A 1G5

Le Parchemin
Station Metro Berri-Demontigny
505 est, rue Ste-Catherine
H2L 2C9

Wilson-Lafleur Ltée
39 ouest, rue Notre-Dame
H2Y 1S5

Mont Saint-Hilaire

Librairie Dialecta Inc.
135, rue Messier
J3H 3W8

Québec

Librairie Garneau Québec (1982)
47, rue Buade
G1R 4A2

Librairie Laliberté Inc.
Centre d'achats innovation
2360, chemin Sainte-Foy
G1V 4H2

Librairie Vaugeois
1354, ave. Maguire
Sillery
G1T 1Z3

Rimouski

Librairie l'Alphabet Inc.
Siège social
120 est, rue St-Germain
G5L 4B6

Riviere-du-Loup

Librairie l'Alphabet Inc.
Succursale
298, boul. Theriault
G5R 3K3

Roberval

Librairie Leclerc Ltée
707, boul. Saint-Joseph
G8H 2L3

Rouyn

Le Service Scolaire
150 est, rue Perreault
J9X 3C4

Saint-Hyacinthe

Librairie Comptoir du Livre
548, rue Mondor
J2S 5A9

Saint-Lambert

Editions le Fureteur Inc.
615, avenue Victoria
J4P 3R4

Sept-Iles

Librarie Côte-Nord Enr.
Edifice Place de Ville
Suite 220
770, boul, Laure
G4R 1Y2

Shawville

Librairie Pontiac
133, rue Centre
J0X 2Y0

Sherbrooke

Librairie Demarc Inc.
Carrefour de l'Estrie
3050, boul. Portland
J1L 1K1

Librairie des Editions Paulines
250 nord, boul. Saint-Francois
J1E 2B9

Librairie Universitaire
Pavillon Albert Leblanc
2500, boul. Université
J1H 5N4

Trois-Rivières

Clément Morin & Fils Ltée
4125, boul. des Forges
G5Y 1W1

Librairie Poirier Inc.
1545, rue Royale
G9A 4J9

Val d'Or

Librairie Régionale Leméac Enr.
769, 3ième avenue
J9P 1R9

Valleyfield

Librairie Boyer Ltée
10, rue Nicholson
J6T 4M2

Victoriaville

Librairie Beaux-Livres Inc.
Carrefour des Bois-Francs
559 est, boul. Jutras
G6P 7H4

Ontario

Aurora

Tallyman Books
22 Yonge Street S.
L4G 1N4

Barrie

Georgian College Bookstore
One Georgian Drive
L4M 3X9

Belleville

The James Text
183 Front Street
K8N 2Y9

Brockville

Leeds County Books
41 King Street W.
K1V 3P7

Cambridge

Epic Bookstore
John Galt Centre
N1R 6B3

Chatham

Epic Bookstore
Chatham Place
801 St. Clair Street
N7M 5J9

Cobalt

Highway Bookshop
P0J 1C0

Cobourg

The Family Tree House
47 King Street West
K9A 2M1

Dryden

The Bookcase
23 King Street
P8N 1B4

Guelph

Guelph Campus Co-operative
Physical Science Complex
University of Guelph
N1G 2W1

Hamilton

The Bookcellar
144 James Street
L8P 3A2

Gall's Book World
223 King St. East
L8N 1B6

McMaster University Bookstore
1280 Main Street W.
L8S 4L8

Huntsville

The Bookcase
93 Main Street E.
P0A 1K0

Kapuskasing

The Book Shop
Model City Mall
25 Brunetville Road
P5N 2E9

Kenora

Scott's Books
Kenora Shopping Mall
P9N 3X7

Kingston

Campus Bookstore
Queen's University
K7L 3N6

Kitchener

Provident Bookstore
117 King Street W.
N2G 4M5

London

Fanshawe College Bookstore
P.O. Box 4005
N5W 5H1

Oxford Book Shops Ltd.
742 Richmond Street
N6A 1L6

University of Western Ontario
The Bookstore
N6A 3K7

Mississauga

Insight Books
Sheridan Mall
2225 Erin Mills Parkway
L5K 1T9

North Bay

Canadore College
Campus Shop
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Fosdick's
150 Main Street W.
P1B 2T5

Orillia

Epic Bookstore
Orillia Square Mall
R.R. No. 4
L3V 6H4

Oshawa

Civic Books Ltd.
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200 John Street West
L1J 2B4

Ottawa

Capital Library Wholesale
1427 Ogilvie Road
K1J 8M7

Carleton University Bookstore
Southam Hall
Colonel By Drive
K1S 5B6

Le Coin du Livre (Central) Ltée
263, rue Dalhousie
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Librairie de la Capitale/Capital
Bookstore
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K1P 5B8

University of Ottawa Bookstore
85, rue Hastey
K1N 9A6

Librairie Trillium Inc.
321 Dalhousie Street
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Renouf Publishing Co. Ltd.
61 Sparks Street
K1P 5R1

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88 Metcalfe Street
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56 James Street
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Pembroke

McCann's Books & Records Ltd.
Pembroke Mall
1100 Pembroke Street E.
K8A 6Y7

Perth

Valley Bookshop
61 Gore Street E.
K7H 1H6

Peterborough

Trent University Bookstore
224 Charlotte Street
K9J 2T8

St. Catharines

Beattie Stationery
14 Queen Street
L2R 6R4

St. Thomas

Epic Bookstore
Elgin Mall
417 Wellington Street
N4R 5J5

Sarnia

Epic Bookstore
Lambton Shopping Mall
1380 London Road
N7S 1P8

Sault Ste-Marie

Pickwick Book Store
610 Queen Street E.
P6A 2A4

Smiths Falls

R & R Books Ltd.
County Fair Mall
K7A 3Z5

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Shorty's Convenience Store
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P0H 2G0

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M4W 2G6

Bob Miller Book Room
180 Bloor Street W.
M5S 2V6

Librairie Champlain
107 Church Street
M5C 2G5

Renouf Publishing Co. Ltd.
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M5B 1M4

SCM Book Room
333 Bloor Street W.
M5S 1W7

University of Toronto Bookstore
63A St. George Street
M5S 1A6

Trenton

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24 Dundas Street W.
K8V 5R6

Waterloo

University of Waterloo Bookstore
N2L 3G1

Wilfrid Laurier University
Bookstore
75 University Avenue
N2L 3C5

Welland

A.M. Smith Stationery Shop Ltd.
7 Main Street East
L3B 3Z6

Librairie Welland
476 est. rue Main
L3B 3X6

Windsor

The Bookstore, Public Library
850 Ouellette Avenue
N9A 4M9

St. Clair College Bookstore
2000 Talbot Road West
N9A 6S4

Woodstock

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Blanford Square Mall
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N4S 1B8

Manitoba

Brandon

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R7A 0K6

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180, boul. Provencher
R2H 0G4

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R3L 1YN

University of Manitoba Book Store
Fort Garry Campus
R3J 2N2

Saskatchewan

Moose Jaw

Prairie
428 Main Street
S8H 3K2

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S4P 2G9

University of Regina Bookstore
S4S 9A2

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Saskatoon Book Store Ltd.
148 Second Avenue N.
S7K 2B2

University of Saskatchewan Bookstore
Marquis Hall
S7N 0W0

Yorkton

Accent on Books
Broadway Park Plaza
470B W. Broadway Street
S3N 0P3

Alberta

Banff

Banff Book & Art Den
104 Banff Avenue
T0L 0C0

Calgary

Carmen Moore Book Orders Ltd.
617-10th Avenue S.W.
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T2P 0V5

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T5J 2Y8

Librairie Le Carefour Book Ltd.
10014-109e Rue
T5J 1M4

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Jasper

Jasper Camera & Gifts Ltd.
P.O. Box 70
T0E 1E0

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Arcade Mall
435A Third Street S.E.
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4926-49th Street
T4N 1V3

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St. Albert Bookshelf Ltd.
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T8N 1B4

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V1C 2M9

Duncan

Volume I Bookstore
149 Kenneth Street
V9L 1N5

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Quality Books
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V2C 2A1

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Mosaic Books
1420 St. Paul Street
V1Y 2E6

Nanaimo

Book Store on Bastion Street
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V9R 2Z9

New Westminster

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V3L 3C5

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Okanagan Books Ltd.
239 Main Street
V2A 5B1

Powell River

Windflower Books & Stationery
4539 Marine Avenue
V8A 2K5

Richmond

Bomber Joe's Bookstores Ltd.
South Terminal Building
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Vancouver AMF
V7B 1V7

Sechelt

Sechelt Bookstore
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V0N 3A0

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Renouf (BC) Ltd.
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V7M 2J5

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V8P 5J2

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V8W 2Y2

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Fort Smith Workshop
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X0E 0P0

Inuvik

Mac's News
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X0E 0T0
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Yukon

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THE AUTHORS

Margot J. Wojciechowski has a B.A. in Political Science and Economics from the University of Toronto (1958) and an M.A. in Political Studies from Queen's University (1970). Her professional experience includes three years as an economist with the Dominion Bureau of Statistics, and several research positions in the field of public administration. She is now assistant director of the Centre for Resource Studies at Kingston.

Katherine A. Graham teaches in the School of Public Administration, Carleton University, and is a research associate of the Centre for Resource Studies. She holds degrees in Politics from Glendon College of York University and Queen's University and has taught at both universities. A significant part of her research and consulting experience relates to the north. This includes work on the impact of small craft harbour facilities in the Northwest Territories, a review of the administration of mineral exploration in the Yukon and Northwest Territories, preparation of background studies on local and regional government in the Northwest Territories for C.M. Drury and the Western Constitutional Forum and evaluation of the funding of public participation in the Beaufort Sea Environmental Assessment Review, and work as principal investigator for the Eastern Arctic Study.

THE CENTRE FOR RESOURCE STUDIES

The Centre for Resource Studies (CRS) was established in 1973, under the sponsorship of Queen's University, the federal Department of Energy, Mines and Resources, and The Mining Association of Canada, to carry out a program of research and publication on mineral policy issues.

The Centre provides opportunities for multidisciplinary research in resource studies at Canadian universities, furnishes reliable information on matters related to mineral resource policy, and promotes closer liaison between government, industry and other concerned groups. The research program is carried out both at the Centre and by means of contracts with qualified investigators, usually at Canadian universities. Small exploratory studies are also funded, through a system of grants-in-aid of research. CRS Seminars involve representatives from governments, industry, universities, labour, and other interested groups in working sessions on issues of current concern. Through this program of research and seminars, and the resulting publications, the Centre contributes to informed discussions and a better understanding of significant issues.

The Centre is governed by a board of directors which establishes general policy and priorities for research. The board has sixteen members, appointed by Queen's University, The Mining Association of Canada, and the federal government. Guidance on the research program, together with discussion of policy issues and other matters, is provided by the Advisory Council. This body comprises all researchers associated with the Centre, together with members appointed from such groups as governments, industry, labour, and other interests. A Research Advisory Committee aids in the development of projects and the selection of research proposals. The executive director and staff are responsible for the work of the Centre within this framework.

Most of the funding for the Centre's activities is provided by two of the sponsors, EMR and MAC. In addition, the Centre accepts contracts from other organizations interested in mineral policy research.

The Centre welcomes comments on its publications, proposals for research projects or for publication, or enquiries about any aspect of its work. For further information, contact:

Centre for Resource Studies
Queen's University
Kingston, Ontario, Canada K7L 3N6
(613) 547-5957

CRS PUBLICATIONS

Monographs and Collections

Conflict and its Resolution in the Administration of Mineral Resources in Canada, by R.M. Burns; 62 pages, 11 tables. Published 1976.

The Impact of the Mining Industries on the Canadian Economy, by R.W. Boadway and J.M. Treddenick; 116 pages, 15 tables. Published 1977.

The Transportation Impact of the Canadian Mining Industry, by A.I. Wallace; 154 pages, 17 tables. Published 1977.

Human Resources in Canadian Mining: A Preliminary Analysis, by J.A. MacMillan, G.S. Gislason, and S. Lyon; 174 pages, 48 tables. Published 1977.

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